Redistribution of Economic Resources due to Conflict: The Maoist Uprising in Nepal [1]

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Abstract

Nepal has seen a significant reduction in poverty over the period 1995–2010 which encompasses the decade-long Maoist-led civil war. So was the post-conflict provision of economic resources to districts related to their involvement in promoting the Maoist cause? We tackle this question combining theory and empirics. Our model predicts that poorer districts are more likely to support the Maoists and in return they get promised economic gains conditional on the Maoists prevailing post-conflict. Combining data on conflict with consumption expenditure data from the Nepal Living Standards Survey and data on foreign aid, we test these predictions. Our panel data estimates and our cross-sectional analysis consistently find strong support for our hypotheses. These are confirmed by the IV analysis that we perform at the panel level.

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1 Introduction

Civil wars have been studied by academics from various disciplines and from many different angles. Given that civil wars have persisted over centuries in this world and have affected millions of lives, this attention is quite justified. According to Miguel, Satyanath, and Sergenti (2004), the toll civil wars have taken dwarf the casualties exacted by inter-state wars since World War II. Even though sub-Saharan Africa has borne the brunt of civil wars for decades now, this phenomenon is by no means restricted to that area. In recent years, several countries in Asia too have witnessed civil conflict. We study the decade-long Maoist uprising in Nepal (1996–2006) which eventually culminated in the abolition of monarchy in 2008 and brought the left parties considerable success in the elections that followed. Clearly, this civil war resulted in strengthening multi-party democracy and reducing the erstwhile powerful monarch to a titular head.

We are interested in studying the economic implications of civil conflict. In particular, our interest is in the fortunes of different groups *subsequent to the cessation of the civil war* and how it may be connected to their participation in the conflict. The civil conflict in Nepal is a context amenable to studying such issues especially given that the challenger (the Maoist group) achieved a large degree of political power after the hostilities ended. The questions which interest us are: (i) Which groups tend to participate more in conflict? (ii) Are they rewarded in a manner commensurate with their efforts? In other words, was there an implicit *quid pro quo*? Nepal witnessed a large reduction in poverty levels over the period 1995-2010. However, the reduction was far from uniform across the districts.[2] Given that this period roughly coincides with the duration of the civil war and the subsequent joining of the Maoist parties in the government, can one link this differential poverty reduction to the putative "rewards" story? (iii) Do the observed patterns of poverty and inequality shed light on the challenger's objective? Specifically, does the new government behave in a clientelistic manner or more like a benevolent social planner?

We attempt to answer such questions by combining theory with empirical analysis. In our model, there are three key sets of actors: the Maoist group, the king and the citizens of the nation. The citizens are partitioned into groups which may be thought of social, income or occupational categories. The main feature is that the groups have different income distributions; so they can be ranked in terms of average incomes. In this way we are able to isolate the interplay between group-level income and conflict. The game proceeds as follows. First, the Maoists decide whether or not they want to challenge the regime. If they do challenge, then both the Maoist group and the king simultaneously decide on how hard to fight. Specifically, the Maoist group promises (non-negative) transfers to the various groups which are to be delivered to them only if the Maoist group prevails in the conflict. Thus, these transfers are the "rewards" conditional on a Maoist victory. These transfers are to be

[2]See e.g. Mitra (2016).

financed out of a budget whose control lies with the head of the government. The idea is that once the Maoists win the power of the king will be heavily curtailed and the country will move to democracy.

The king can use his finances to buy effort from his army to combat the rebels.[3] The extent of military effort has the ability to affect the final outcome of conflict.[4] Faced with these choices, the groups then decide individually and simultaneously on their supply of effort for the Maoists. Of course, choosing to supply zero effort is possible and is interpreted as not supporting the Maoists.[5]

We impute two very different objective functions, in turn, to the Maoists. First, we assume that the Maoists are aiming to maximise private gains — so they try to "purchase" conflict efforts from the various groups as economically as possible. In the other scenario, we assume that the Maoists are entirely motivated by welfare concerns; here, they promise transfers as a benevolent social planner would. Their aim is to maximise some form of a Benthamite social welfare function. We show that poorer groups contribute more effort to support the Maoists *regardless* of the motivations of the Maoists.[6] This is without any assumption of ideological affinities between them and the Maoists. Moreover, they do so even when they are promised *lower* transfers — in absolute terms — as compared to their rich counterparts (in the case where the Maoists behave opportunistically). Next, we show that there is an implicit lower bound on how "cheaply" the poorer groups can be bought (in this "opportunistic Maoists" case) so that they turn out to be gainers in a relative sense. This aspect of conflict-based reward is what we try to establish empirically. Additionally, the two different motivations for the Maoists bear different implications in terms of movements in poverty and inequality. We use our empirical analysis to test which of the two motivations obtains greater validation.

Using data on conflict, data on consumption expenditure from the Nepal Living Standards Survey (NLSS) and foreign aid data, we created a district-level panel. We have data on consumption expenditure for the pre-conflict period from the NLSS-I (conducted during 1995-96) and for the post-conflict period we use the third wave of NLSS that was conducted in 2010-11. We combine these with data on projects financed through foreign aid. These projects are mainly for the purpose of a district's infrastructural and economic development. This is what we primarily use as our measure for transfers ("rewards") to districts.

[3]Think of this army as a private one who must be maintained at some expense to the king. Of course, the upkeep of such an army may be financed by taxes on the districts; but then again this is money which the king could potentially "consume" himself but chooses not to and implicitly uses it to "pay" his army. The King of Nepal had mobilized about 80,000 Royal Nepalese Army with the aim of ending the Maoist insurgency (see Sharma (2006)).

[4]This role of the incumbent (king) is similar in spirit to that of the political incumbent in Caselli and Tesei (2016) where s(he) is allowed to choose the degree of political contestability by deciding how much to spend on vote-buying, bullying, or outright repression.

[5]We assume (as is standard) that the outcome follows from a contest success function whose inputs are the aggregate conflict contributions from each side (the king and the Maoists).

[6]This is consistent with several empirical studies on Nepal cited below.

Using these data and performing both panel level and cross-sectional analysis, we consistently find that districts which experienced higher levels of conflict during the decade-long Maoist war were more likely to have a greater number of foreign aided projects in years after the war even when controlling for the district-level poverty rate. Our results survive a series of robustness checks: alternative measures of conflict, of poverty, of inequality. We split the projects into seven broad categories and separately examined the results for each category. By and large, these sectoral regressions re-iterate our main findings.

We also conduct a Two-Stages Least Squares (IV) analysis to check the robustness of our findings. It is argued that one of the important sources of funds for the Maoists came from the control of timber smuggling to India. We exploit this channel in terms of developing an instrument for our conflict measure(s) at the district level. The ecology (specifically, the elevation and vegetation) varies considerably across the different districts of Nepal. However, the type(s) of timber a district can offer is clearly a time-invariant entity. However, the prices of these — in India — *do* vary over time. Thus, a weighted index of these prices at the district-level — where the weights come from the proportion of the district vegetation falling into one of the ecological categories — would be a measure of the funding sources of the Maoists from the district at a point in time. Insofar the price movements in timber in India are independent of the aid disbursements/targetted transfers in Nepal (our outcome variables), such a weighted index would be exogenous and hence allow for improved identification of the effects. The results from our IV analysis re-enforces and in fact strengthens our basic findings.

All in all, our empirical results strongly corroborate with our theoretical predictions. Moreover, we cannot discern any effect of conflict-proneness on either poverty or inequality — this suggests that the motivations of the Maoists appear closer to those of the opportunistic/clientelistic agent rather than that of the benevolent planner.

Our work relates in different ways to several strands of the relatively recent but growing literature on conflict.[7] It adds to the literature on the relationship between economic conditions and warfare (see e.g., Acemoglu and Robinson (2001), Bates, Greif, and Singh (2002), Chassang and Padro-i Miquel (2009), Esteban and Ray (1999), Esteban and Ray (2008), Gawande, Kapur, and Satyanath (2012), Grossman (1991), Grossman and Kim (1995), Hirshleifer (1991), Skaperdas (1992)). In terms of linking the budget size to conflict intensity our model speaks to the conflict and state capacity issue raised by Fearon and Laitin (2003).[8] Our model shares some similarities with Besley and Persson (2010) who study why weak states are often plagued by civil disorder which reinforce low investments in legal and fiscal capacity.[9] In focussing on foreign aid and conflict, our paper relates to Dube and Naidu

[7]See the survey by Blattman and Miguel (2010) for an overview of the literature on civil wars.

[8]They argue that the main routes that link poverty and civil war are low repressive capabilities resulting from weak armies and bad road connectivity.

[9]In a related paper, Besley and Persson (2011) study which political and economic factors drive one-sided or two-sided violence (repression as opposed to civil war). Powell (2004) approaches the issue of how power

(2015) who find that US military assistance leads to differential increases in attacks by paramilitaries in Colombia.

Our result concerning poorer districts supplying more effort for the Maoists resonate with Collier and Hoeffler (1998, 2001, 2002) who argue that civil wars are essentially driven by poor economic opportunities. Like Dube and Vargas (2013) and Mitra and Ray (2014), we touch upon the "opportunity cost effect" and "rapacity effect" albeit from a slightly different standpoint. Lind, Moene, and Willumsen (2014) examine the effect of conflict on illegal activities like opium production in the context of Afghanistan. They argue that conflict affects general lawlessness in states where instituions are weak and this induces farmers to switch from foodgrain cultivation to crops (like opium) which may be illegal but provide ready money. Like in our paper, they too focus on how conflict affects incentives.

Our paper shares certain similarities with papers which focus on Nepal, particularly, Do and Iyer (2010), Acharya (2009), Gates and Murshed (2005), Bohara, Mitchell, and Nepal (2006) and Bohara, Gawande, and Nepal (2011). Acharya (2009) finds geography and the history of political activism to be relevant for violence. Gates and Murshed (2005) find a strong association between the Gini and conflict. Bohara, Gawande, and Nepal (2011) find strong evidence that greater inequality escalates deadly violence. However, it matters how one measures inequality: polarization turns out to be the more persistent type of inequality causing conflict. Sharma (2006) states that the failure of development efforts in Nepal contributed to a rise in poverty and rural-urban inequality. This, in turn, fueled frustration among the disadvantaged youth in the rural and remote areas, leading to the eruption of the civil war. In sum, these studies provide evidence on variables associated with the origin and escalation of Maoist violence in Nepal; this feature distinguishes them from our work which tries to identify the effects of conflict on resource allocation.

De Juan and Pierskalla (2016) investigate the role of violence in shaping the trust citizens have in their national government. They utilise geo-referenced survey data joined with village level information on civil war casualties to estimate the effects of exposure to violence on political trust in Nepal. They uncover that exposure to violence matters for reducing trust in the national government. Libois (2016) poses a question which is close to ours in some ways. He looks at the short and medium term consequences of the Nepalese civil war on rural households livelihoods and on the inter-group distribution of income. He finds that in the short-run all households lose, but high castes by a larger extent. However, high castes diversify their income sources, notably by relying on migration, which allows them to recover. He does not explore the political-economy mechanism which we seek to emphasize: namely, the strategic role of conflict in diverting resources across districts *ex-post*.

The remainder of the paper is organized as follows. Section 2 presents a simple model designed to address our main questions. Section 3 describes the data, the empirical strategy

is used inefficiently (e.g., by means of open conflict as opposed to peaceful bargaining) when information is complete. Our setup also involves complete information though bargaining is not an option for the players.

and findings and Section 4 concludes. All proofs are contained in the appendix.

2 Theory

2.1 Basic Setup

Prior to the Maoist conflict, the *de facto* head of the government was the monarchy. The political history of Nepal confirms this.[10] We denote the incumbent head of government by K (for 'King'). The potential challenger is the Maoist group, denoted by M. Let the entire country be partitioned into N groups (social/income/occupation) where $N \geq 2$. The income distribution is allowed to vary across these groups; in particular, let y_i denote the average income in group i. One should think of y_i as being *net* of taxes. The groups are assumed to be identical in all other respects. This abstraction is simply in order to bring certain links — specifically those between the economic status of a group, it's participation in the Maoist conflict, and the subsequent allocation of funds for reconstruction post-conflict — into sharper focus.

Why do either K or M want to stay at the helm of the government? We take the position that there are "rents" from holding office. These rents may take the shape of economic gains made possible from holding the reins of power. Specifically, there is an amount of money B which can be thought of as funds which can be allotted to the various groups for their economic development. However, it is also possible to appropriate a part or the whole of B by the incumbent ruler. Where does this B come from? It is partly arising out of the public funds raised by the incumbent government through taxation and part of it may come from foreign investors/donors.

The game proceeds in three stages.

Stage 1: M decides whether or not to initiate a nationwide uprising/conflict against K.

[10] In 1951, late King Tribhuvan brought democracy to Nepal. Then, two major political parties – Nepali Congress Party and the Communist Party of Nepal – emerged and they forced the King to declare parliamentary elections leading to the establishment of the first democratically elected government in 1959. With the death of King Tribhuvan, his son late King Mahendra overthrew the democratically elected government, curtailed political freedom and outlawed opposition parties by restoring a single party system known as the Panchayat System in December 1960. Under this system, the King kept all executive powers and people around him enjoyed privileges which promoted lack of transparency and favoritism. The late King Birendra, who came to the throne after the death of his father King Mahendra in 1972, continued with the Panchayat System until the political agitation of the late 1980s which forced him to give way to a multi-party democracy in 1990 and became a constitutional monarch. With the re-instatement of multiparty democracy, people's expectations rose and there was widespread perception that they will have a fair go in the democratic process. Unfortunately, due to institutionalization of corruption, nepotism, and favoritism these expectations were not met as power was still concentrated in the hands of the King and his coterie. While the civil conflict was under way, the King sacked the democratically elected government twice in just over two years, and on February 1, 2005 he took over as the head of government (see e.g, Sharma (2006)).

Formally, M chooses an action a where $a \in \{C, NC\}$; here C denotes 'conflict' and NC denotes 'no conflict'. If $a = NC$ then the game ends and everybody gets their default or peace payoffs (stated below). Otherwise, we move to the next stage.

Stage 2: Here both M and K move simultaneously. Here, M promises an allocation $\mathbf{x} \equiv (x_1, ..., x_N)$ to each of the N groups from the funds B were K to be deposed and replaced by M at the end of the conflict. Note, $x_i \geq 0$ for each $i \in \{1, .., N\}$. Here K chooses the extent of military resistance to the conflict, denoted by $R_K \geq 0$.[11]

Stage 3: In this stage, each group decides on how much support, if any, to provide to the Maoist side in the conflict. We assume that within each group there is a "leader" who decides on the allocation of resources for the conflict.[12] Call this allocation r_i which again must be non-negative. It is the sum of these individual group-level contributions that make up the total resources in favor of M. Call it R_M. The outcome of the conflict is realized based on R_M and R_K and everybody gets the "conflict payoffs" which are described below.

2.1.1 Interpretation of conflict.

Before proceeding further it is important to state as what we mean by the term"conflict" in our setup. Conflict should be viewed as a channel to bring about a change in the *form* of government; it is not a mere change in the *identity* of the head of the government. If the Maoists are able to win the conflict, then monarchy would be abolished (thereby curtailing K's influence on governance to a significant degree). The following quote from Sharma (2006) affirms this:

"The declared aim of the Maoists is to wipe out the bureaucratic-capitalist class and state, uproot semi-feudalism, and drive out imperialism."

Notice, there is *no* guarantee that the Maoists will actually win the elections after emerging victorious in the conflict. So their promises of transfers x_i to group i can be interpreted in the following way. These x_i's are implicit campaign promises by M who the group-members believe are going to contest in the elections were M to win the conflict. To be sure, these transfers by M are geared towards mobilising support for them in the conflict and not designed to get the most votes necessarily — more on this shortly.

We assume that the transfers announced by M are credible. This seems plausible for the following reason. It is true that potentially the transfer schedule $\mathbf{x}$ is *not* optimal from a purely electoral perspective.[13] Hence, M would have an incentive to deviate (post-conflict) from the announced transfer schedule $\mathbf{x}$ to say $\mathbf{x}'$ where the latter schedule targets the

[11] K is not allowed to make promises of transfers like M. The underlying reason being that K's offer of transfers at this stage lack credibility, given that K has been a long-standing incumbent.

[12] This is basically to avoid any free-rider issues. This assumption of a leader or a median voter to circumvent free-riding possibilities is standard in the conflict literature (see e.g., Esteban and Ray (2008)).

[13] We are grateful to an anonymous referee for highlighting this point.

electorally important groups more efficiently. However, all agents being rational can foresee this and hence the conflict support will be jeopardised. Therefore, to actually topple K, M must *not* renege from the promised transfer schedule $\mathbf{x}$. In a sense, one could say that M cares about its reputation: by not reneging on the original promise, M builds a "good" reputation. This is important for M especially if it is keen to perpetuate its grip on power.

The idea that reputational concerns drive commitment derives from the (unmodelled) possibility of repeated interaction between the players which is similar to that in probabilistic voting models. In these models, the voters trust the parties to deliver on their promised platforms as not doing so damages the latter's credibility for future elections. In our model, M not delivering on the original promise would erode any faith the voters would have in subsequent elections. Hence, a far-sighted M will not renege.

2.1.2 Peace payoffs.

In case there is no conflict, i.e., M chooses NC in stage 1, then all players get their default payoffs. M gets a payoff of 0. All the groups obtain their respective incomes; so group i gets y_i for each $i \in \{1, .., N\}$.

For K, the default payoff is the sum of two parts: one is $W > 0$ which can be thought as previously accumulated wealth.[14] The other part comes from a portion of B which K appropriates *systematically* in the face of no potential threats to his authority. Call this ψB for some $\psi \in (0, 1)$.

2.1.3 Conflict payoffs.

The outcome of the conflict, provided M chooses C in stage 1, is determined by a standard contest function. Specifically, the probability that M wins is denoted by p which is given by

$$p = \frac{R_M}{R_M + R_K}$$

for $R_M + R_K > 0$. In case $R_M + R_K = 0$ the outcome follows from a lottery whose odds are public information.

Therefore, the expected payoff to a district i in a conflict is given by:

$$\frac{[y_i(1 - r_i)]^{(1-\sigma)}}{1 - \sigma} + px_i$$

where $\sigma \in (0, 1)$. Thus M effectively "purchases" conflict effort r_i by promising x_i. By construction, r_i lies in the unit interval. The idea is that each group has one unit of time

[14] In a truly dynamic setting with multiple periods, this would presumably be dependent on B from the earlier periods.

endowment which can be used for income-generating activities or for conflict. Hence, r_i is the fraction of time devoted to the Maoist cause. We define R_M to be the aggregate contribution, once we sum over all the N groups. R_K is the time spent by the military on resisting conflict.

Observe, R_M determines the chances of M's victory. This implies that the amount of time spent in the Maoist cause is important for determining M's success; it does not matter if that time input came from a rich group or a poor group. In the conflict literature, it is argued that conflict requires both "money and bodies". While this is no doubt true, we emphasise the "bodies" aspect here and hence the logic for R_M being the measure of time devoted to M's cause rather than financial resources. This is reasonable in developing countries where conflict — and therefore it's impact — involves a large degree of human participation and often with little resort to physical capital in the sense of sophisticated expensive armaments (see Grossman (1991) and Mitra and Ray (2014) among others).

Notice that x_i is the same for every individual within group i. Hence, these are to be viewed as public goods, albeit "local" in the sense of being restricted within a group.

For M, the expected payoff involves the expected return from winning the conflict net of any direct costs of conflict which M has to privately pay for. Let χ represent this cost; this is like an entry fee which signifies M's commitment to overthrowing K. So M's payoff is the following:

$$p(B - \sum_{i=1}^{N} x_i) - \chi.$$

Intuitively, a higher entry cost (χ) serves as a potential deterrent for choosing C. If χ is particularly high, then M might choose NC in the first stage, a situation which we feel is not particularly relevant in light of the empirical evidence. So we assume $\chi << B$ i.e. "small" in relation to B so that conflict is a possibility in equilibrium. Note, a higher amount of transfers to the groups, as captured by $\mathbf{x}$, may affect the chances of M's success but leaves less for M's own "consumption". For K, the expected payoff is:

$$W - cR_K + (1-p)\psi B$$

where c denotes the wage rate of the military.

2.2 Equilibrium

We use the standard notion of subgame perfection as the equilibrium concept for this game. To be specific, an equilibrium (SPNE) of this game is given by M's strategy $a \in \{C, NC\}$, a collection of groupwise allocations by M, K's military allocation and the group conflict contributions, $\{a, x_i, R_K, r_i\}_{i=1}^{N}$, all of which together satisfy the following:

(i) Each group's contribution to conflict — r_i for group i — is a best-response to $\{a, x_i, R_K\}$ and $\{r_j\}_{j\neq i}$.

(ii) M's choice of $\{a, \mathbf{x}\}$ is a best-response to $\{R_K, \{r_i\}_{i=1}^N\}$.

(iii) K's choice of R_K is a best-response to $\{a, x_i, r_i\}_{i=1}^N$.

Given the equilibrium notion adopted, we start by solving backwards.

Consider the problem faced by a typical group i in the last stage. This group takes $\{x_i, t_i; R_K, a\}$ and $\{r_j\}_{j\neq i}$ as given. Hence, the problem is the following:

$$max_{r_i\in[0,1]} \frac{[y_i(1-r_i)]^{(1-\sigma)}}{1-\sigma} + \frac{r_i + \sum_{j\neq i} r_j}{r_i + \sum_{j\neq i} r_j + R_K} x_i$$

Observe that the objective function is concave in r_i and hence the first order condition w.r.t r_i for an interior solution is both necessary and sufficient.[15] Note, this is given by:

$$x_i \frac{R_K}{(R_K + R_M)^2} = \frac{y_i^{(1-\sigma)}}{(1-r_i)^\sigma} \tag{1}$$

where $R_M = r_i + \sum_{j\neq i} r_j$. Observe, if $x_i = 0$ then the optimal choice of r_i is 0. So clearly, the above holds only for $x_i > 0$.

Now, we step back to stage 2. Let us begin with M. Note, M's problem takes the following form:

$$max_{\mathbf{x}\geq \mathbf{0}} \quad \frac{R_M}{R_M+R_K}.\left(B - \sum_{i=1}^N x_i\right) - \chi$$

Given that we are in stage 2, χ is already paid (like a "sunk cost") and hence M's choice of $\mathbf{x}$ does not depend upon it. Notice, $\mathbf{x}$ affects M's payoff through two channels: (i) as a "payment" made out of funds B, hence decreasing M's consumption and (ii) by mobilising the groups to contribute to conflict, i.e., via the effect on r_i for $i \in \{1, .., N\}$; this in turn affects the chances of M's success in conflict.

Hence the first order condition w.r.t x_i in M's problem for an interior solution is the following:

$$\frac{\partial r_i}{\partial x_i}\left(B - \sum_{i=1}^N x_i\right) = \frac{(R_K + R_M)}{R_K} R_M \tag{2}$$

In equilibrium – from M's perspective – the marginal return from any additional transfer to group i must be equalized across all groups which receive a positive transfer. Otherwise

[15] Notice that the CES specification with regard to utility from income *net of conflict contribution* rules out $r_i^* = 1$.

M could redistribute resources across them and gain. So it must be that $\frac{\partial r_i}{\partial x_i} = \frac{\partial r_j}{\partial x_j}$ for any $i \neq j$ where $x_i, x_j > 0$. This is reflected in Equation (2).

Now consider K. K's problem can be depicted by:

$$max_{R_K \geq 0} \;\; W - cR_K + \left(\frac{R_K}{R_M + R_K}\right)\psi B.$$

Hence the (necessary) first order condition w.r.t R_K is the following[16]:

$$\psi B = c\frac{(R_K + R_M)^2}{R_M} \tag{3}$$

Any feasible $\{x_i, R_K, r_i\}_{i=1}^N$ which solves equations (1), (2) and (3) constitutes an equilibrium of this game.[17]

This sets the ground for our main results.

2.3 Main Results

As a starting point, consider the following symmetric case. Suppose M offers the same transfer across all the groups – call it x. Can this be part of any equilibrium of this game? The following observation provides the answer.

OBSERVATION **1.** *For every $i \in \{1, .., N\}$, $x_i = x$ is not possible in equilibrium.*

Proof. See Appendix. ■

The intuition behind this result is quite straight-forward. When faced with identical "reward" schedules (x), the incentives of groups to supply effort for conflict (in M's cause) differ by incomes. When faced with the same lottery, a poor group is willing to supply more effort than a rich one given that the risk-aversion parameter is the same. However, what M does in equilibrium is to equalize the marginal returns (in terms of conflict contribution) to transfers (x) across all the groups; otherwise M could gain by shifting transfers to the group which offers a higher marginal return. And even though poorer groups would willingly contribute more in this case, the marginal return to M from their contribution would be lower than that from richer ones *for the same* x. This is basically what prevents such symmetric schedules from being part of any equilibrium.

This leads us to the question as to which groups actually supply more conflict effort in equilibrium: is it the rich ones or poor ones? The discussion above suggests that poorer

[16]Note, $R_M > 0$ in equilibrium implies $R_K > 0$.

[17]We assume that we are in that parameter-space of our model where at least one such equilibrium exists.

groups are willing to contribute more to conflict when offered the same returns as the rich ones. But given the argument about equalization of $\frac{\partial r}{\partial x}$ across groups which participate in conflict, is it possible that the poorer ones are actually offered *lesser* (by M) than their rich counterparts? If that is indeed so, then it is not clear whether they will end up offering higher levels of support for M. The following observation sheds some light on this matter.

OBSERVATION **2.** *Take any two groups i and j such that r_i, $r_j > 0$. Then $x_i < x_j$ whenever $y_i < y_j$.*

Proof. See Appendix. ■

Given Observation 2, one is tempted to ask if the conflict contribution by any group is actually increasing in a group's income. This is dealt with in the following proposition.

PROPOSITION **1.** *Suppose $y_i < y_j$ for $i, j \in \{1, .., N\}$. Then in equilibrium, $r_i > r_j$ whenever x_i, $x_j > 0$. In other words, among the groups which support M, it is the poorer ones which contribute more for M.*

Proof. See Appendix. ■

Proposition 1 informs us poorer groups unambiguously supply more effort in M's cause. The reasoning behind the result in Observation 1 can be extended to explain this. Take two groups, i and j with the former poorer than the latter. Starting from the equal transfers scenario, there is a marginal gain from redistributing to j and away from i. This redistribution registers an increase in overall support for M. Hence, M must set transfers so that $x_i < x_j$. However, this difference in *net* transfers between i and j is not so large so as to reduce r_i to a point below r_j. So the more ardent supporter (the poorer group) is paid a bit lower in the net but not so much lower that it's support falls below the less ardent one's (the richer group).

We now turn to the assessment of gains from the Maoist conflict. We are particularly interested in identifying which groups gain more than others following the success of M in the conflict. The next proposition deals with this issue.

PROPOSITION **2.** *Suppose that M wins the conflict. Then among the groups which contributed to M, it is the poorer ones who gain more in relative terms. In other words, for r_i, $r_j > 0$, we have $\frac{x_i}{y_i} > \frac{x_j}{y_j}$ whenever $y_i < y_j$.*

Proof. See Appendix. ■

By proposition 2 the transfer received as a fraction of the initial income is *decreasing* in terms of initial incomes. In this sense, one could call the poorer groups the relative gainers post-conflict conditional on M winning.

The careful reader may point out that it is not $\frac{x_i}{y_i}$ which matters but one should consider how x_i fares in relation to the income net of conflict contributions, since that contribution is made upfront and irrespective of who wins or loses. In other words, the comparison should be based on $y_i(1-r_i)$ as opposed to y_i. But it is easy enough to address this. Take groups i and j with $y_i < y_j$. By Proposition 1, we have $r_i > r_j$. Hence this implies $y_i(1-r_i) < y_j(1-r_j)$. Therefore,

$$\frac{x_i}{y_i} > \frac{x_j}{y_j} \Rightarrow \frac{x_i}{y_i(1-r_i)} > \frac{x_j}{y_j(1-r_j)}$$

and the conclusions of Proposition 2 still apply.

2.3.1 Implications in terms of poverty and inequality

Given that our empirical analysis is conducted at the district level, here we discuss the implications of our theoretical results for district-level observables like poverty and inequality. A natural way to translate our group-level results to the district level is to call a district poor (respectively, rich) if it is mainly composed of low-income (respectively, high-income) groups. Given this, the core message of Proposition 1 can be interpreted as poorer *districts* being more likely to support the Maoists in the conflict. Additionally, by Proposition 2, it is these poor, ardent supporters of M who are likely to gain more in proportionate terms. This suggests that poverty in a district is likely to reduce (or, at least, *not* increase) owing to this quid pro quo arrangement with M.

One can apply a similar logic to tease out the effect on district-level inequality. However, here the effect is less clear since some non-poor groups may contribute to M's cause and get more in return in absolute terms (see Observation 2). So it is possible that district-level inequality may actually increase.

So far we have assumed that the Maoists behave strategically — in particular, their offers of transfers to the groups (x_i to group i) are simply to incentivise the groups to provide the effort which maximises the Maoists expected rents from holding office. One may argue that the Maoists need not be so self-interested; they could genuinely be concerned with the welfare of the various groups. To consider this possibility, we solve the baseline model for a benevolent M to check if the implications in terms of group-wise transfers, district-level poverty and inequality are any different.

2.4 M as the benevolent planner

Let M be non-strategic in the sense that the transfers offered to the groups (namely, the vector of x_is) are not made with the view to elicit the effort levels optimal for maximising M's private gains/rents. Here, the transfers are chosen to maximise a social welfare function involving the individual group payoffs. For simplicity, let M solve the following:

$$max_{\mathbf{x}} \sum_{i=1}^{N} u(y_i + x_i)$$
$$\text{s.t. } \sum_{i=1}^{N} x_i \leq B$$
$$x_i \geq 0 \ \forall i$$

where $u(.)$ is some standard increasing and concave function with $u'(0) = +\infty$. Let the solution to this be denoted by $\mathbf{x^P}$. Given this simple setup, straightforward manipulation of the FOCs of the above problem yields the following result: for B sufficiently large, $\mathbf{x^P}$ is such that $y_i + x_i^p$ is equalised across all the groups.

The N groups and the incumbent (K) are assumed to be strategic as in the baseline model. Given x_i^p, group i chooses r_i according the FOC outlined in equation (1) as before. Also, K's choice of R_K satisfies the FOC as given in equation (3). In this scenario, what can one infer about the relation between y_i and r_i? Does the result in Proposition 1 still apply?

PROPOSITION **3.** *Suppose M offers $\mathbf{x^P}$. Let $y_i < y_j$ for some $i, j \in \{1, .., N\}$. Then in equilibrium, $r_i > r_j$. In other words, among the groups which support M, it is the poorer ones which contribute more for M.*

Proof. See Appendix. ■

Proposition 3 informs that the core message in Proposition 1 is still valid in this setting. The intuition behind Proposition 3 is not difficult to grasp. If poorer groups were supplying more effort even when offered lesser (see Observation 2), then they will continue to do so when offered more (observe, that M as a benevolent planner favours poorer groups as captured by the structure of $\mathbf{x^P}$). As for Proposition 2, it is not only valid here but can be strengthened to argue that the absolute (and of course, relative) gain to poorer groups is higher. This follows from observing the structure of $\mathbf{x^P}$.

Where does this lead to as regards district-level poverty and inequality? Since the benevolent planner favours poorer groups, this will definitely lead to a lowering of district-level poverty. So at least in a qualitative sense, there is no difference in this regard between a strategic M (baseline case) and a benevolent planner M. But when it comes to district-level inequality, there is a stark distinction. In this case of a benevolent planner M, the transfers ($\mathbf{x^P}$) bring down across-group disparities and hence lead to a lowering of inequality at the district level. This stands out in sharp contrast with the case of a strategic M where district-level inequality could even be increasing.

2.5 An Extension

Here we consider the possibility that the outcome of the civil war need not be an outright victory for either K or M. We formally introduce the possibility of a peace agreement which

results in a compromise between the positions adopted by the two warring groups. To keep the analysis tractable, we assume that in the event M does not win outright (which happens with probability $(1-p)$) there is an exogenous probability $q \in [0,1]$ that the peace agreement is implemented. With the remaining probability (i.e., $(1-q)(1-p)$), K emerges the clear winner.

Here, with probability p, M's platform $\mathbf{x}$ is implemented and with probability $(1-p)q$ the peace agreement is. This brings us to the question of what the peace agreement looks like. We envisage that the peace agreement reflects the partial concession K makes to M insofar that he accepts to implement — to an extent — the transfers that M promised to deliver prior to the start of the conflict. Put simply, we assume — for the sake of simplicity — that the peace agreement outcome is $\theta\mathbf{x}$ where $\theta \in (0,1)$ is an exogenous parameter.[18]

In this setup, the strategic considerations of all the agents change as now $\theta\mathbf{x}$ is also possible. Thus, the optimal choice of $\mathbf{x}$ in the baseline model need no longer optimal in this one. The crucial issue is whether the new equilibrium delivers the key results which we derived in the baseline model. This is what we will pursue closely. As in the analysis of the baseline model, we begin with the last stage of the game where the districts decide on their level of support for M based on $\mathbf{x}$.

Now, the expected payoff to a district i in a conflict is given by:

$$\frac{[y_i(1-r_i)]^{(1-\sigma)}}{1-\sigma} + px_i + (1-p)q\theta x_i,$$

which can be expressed as:

$$\frac{[y_i(1-r_i)]^{(1-\sigma)}}{1-\sigma} + p(1-q\theta)x_i + q\theta x_i.$$

Note, district i takes x_i as given when making the choice. Since both q and θ are exogenous parameters, effectively what district i aims to maximise is given by:

$$\frac{[y_i(1-r_i)]^{(1-\sigma)}}{1-\sigma} + p(1-q\theta)x_i.$$

This is identical to the corresponding expression in the baseline model, except for the term $(1-q\theta)$. Specifically, it is as if *ceteris paribus* district i is faced with a reward of $(1-q\theta)x_i$ rather than x_i. Thus, the new FOC w.r.t. r_i would reflect this reduced incentive to support

[18] We recognise that a more holistic approach would be to endogenise the peace agreement outcome — specifically, θ — depending upon the relative successes of K and M in the conflict. Such a detailed treatment is beyond the scope of the present paper.

M for each district i. To be more precise, the FOC would now be:

$$(1 - q\theta)x_i \frac{R_K}{(R_K + R_M)^2} = \frac{y_i^{(1-\sigma)}}{(1 - r_i)^\sigma} \tag{4}$$

Observe that this change (the factor $(1-q\theta)$) affects all the districts in the same way. Hence from a relative sense, the situation is the same as before. We will substantiate this claim in more detail later.

Now we turn to the prior stage and examine M's and K's incentives. Given the way we have constructed the peace agreement situation, M's considerations are basically unaffected. In the event of a peace agreement, it is K who remains in charge (and earns the political 'rent') but he must respect M's platform insofar he has to implement $\theta\mathbf{x}$. Hence, M's trade-off is the same as in the baseline model.

K, on the contrary, does have incentives which are different from the ones in the baseline model. The main change arises from the fact that K retains the possibility of earning political rents under the peace agreement. K's problem is given by:

$$max_{R_K \geq 0} \;\; W - cR_K + \left(\tfrac{R_K}{R_M + R_K}\right)(1-q)\psi B + \left(\tfrac{R_K}{R_M + R_K}\right) q \left(B - \textstyle\sum \theta x_i\right).$$

The above can be written as

$$max_{R_K \geq 0} \;\; W - cR_K + \left(\tfrac{R_K}{R_M + R_K}\right) \left[(1-q)\psi B + q\left(B - \textstyle\sum \theta x_i\right)\right].$$

In effect, this is the same as maximising

$$max_{R_K \geq 0} \;\; W - cR_K + \left(\tfrac{R_K}{R_M + R_K}\right) B'$$

where $B' \equiv [(1-q)\psi B + q(B - \sum \theta x_i)]$ is a parameter – from K's perspective – in place of ψB in the baseline model.

All of this clearly indicates that the equilibrium in this model will potentially be different from the one in the baseline model — so the optimal $\mathbf{x}$, R_K and $\{r_i\}_{i=1}^N$ will be potentially different. However, given that the change relative to the baseline model affects all districts' strategic considerations similarly (recall, the common factor $1 - q\theta$), none of our main results will be qualitatively affected. Taking note of equation (4) and comparing it with the corresponding one in the baseline model (i.e., equation (1)) makes it clear that none of the Observations or Propositions undergo any qualitative change.

2.6 From theory to empirics

Our theory serves two roles: (a) it provides a framework to interpret some empirical findings and (b) it provides us with some empirically testable predictions.

First and foremost, recall that according to our theory greater support for the Maoists comes from poorer districts regardless of whether the Maoists behave strategically or act as a benevolent planner (from Propositions 1 and 3). This suggests that violence will be greater in such districts. This is in fact borne out by existing empirical studies (see e.g., Do and Iyer (2010)). So here our theory serves role (a).

Secondly, it is precisely these poorer, conflict-prone districts who stand to gain the most relative to their original state (in terms of transfers/implementation of development projects) after the end of conflict when Maoists assume power (see Proposition 2). This is all the more true if the Maoists behave as a benevolent planner rather than acting for their private gains. Hence, regardless of which objective drives the Maoists, the conflict-prone districts will be rewarded. This aspect of conflict-based reward is what we try to establish empirically. So here our theory performs role (b).

Finally, one can empirically document the movement of district-level inequality and then use our theory to pinpoint *which* of these two alternative objectives of the Maoists is empirically validated. So here again our theory performs role (a).

3 Empirical Analysis

3.1 Data

For this analysis we need to combine data on incomes with the data on conflict and data on aid allocation to Nepal. For Nepal, data on incomes is not available and we use data on consumption expenditure that is available from the nationally representative Nepal Living Standards Survey (NLSS).[19] Three rounds have been conducted for this survey, the first was in 1995-96 and subsequents ones were in 2003-04 and 2010-11. So we have data consumption expenditure from the pre-conflict period using the NLSS-I and for the post conflict we use the third wave that was conducted in 2010-11. The NLSS is conducted by the Central Bureau of Statistics, Nepal. The sample size was 3388 households in Round I and increased to 5988 in Round III. The sample is divided into four strata based on geographic regions of the country: mountains, urban hills, rural hills and Terai (or lowlands). Using these data we estimate poverty and inequality numbers for each of the 75 districts in Nepal for the different rounds.

[19] This is hardly a serious handicap given that the survey is nationally representative. For several developing countries (e.g., India) such consumption expenditure surveys are used to estimate poverty levels. This practice is widely accepted.

We utilise two different datasets on conflict. The one which we primarily use is the same as that in Do and Iyer (2010). It is based on information provided in the annual Human Rights Yearbooks published by the Informal Sector Service Centre (INSEC), a Nepalese non-governmental organization. We have from this dataset the total number of causalities for the entire conflict period for each district in Nepal. We have the total number of people killed per 1000 for each district. We also have this total broken down by the number of people killed by the state and by the Maoists separately. The toll exacted by this conflict in terms of human lives exceeds 13,000.[20]

As a robustness check, we also use data from the Global Database of Events, Language and Tone (GDELT) Project. This project monitors the world's broadcast, print, and web news from nearly every corner of every country in over 100 languages and identifies the people, locations, organizations, counts, themes, sources, and events driving our global society every second of every day, creating a free open platform for computing on the entire world. The GDELT 1.0 Event Database contains over a quarter-billion records covering the entire world over 30 years (dating back to 1979) and organized into a set of tab-delimited files by date. It collapses information broadly into date, actors, event and geographical location. We exploit the data from here pertaining to Nepal for the time period relevant to the civil war.

For the data on the Foreign aid funded projects, we use the data available from Nepal's Aid Management Platform. This is a comprehensive source of data on foreign aid maintained at Ministry of Finance, Nepal. There is detailed information on foreign aid-funded projects, their starting date, the funds allocated and the districts they operate in, among other things.[21] However there is some missing information in some of the entries. For some projects listed in this database either the start date was missing or the amount allocated was missing. From the specific project documents for such projects, we have filled in these missing values into the database. From this source we use the total number of projects active in a district between 1996 and 2006 and then from 2007 to 2014.[22] We also use the total funds allotted to any district.[23] Along with this we also use data from the Government of Nepal on the District Development Allocation for the years 1995 and 2003. These figures provide us with an idea of the Government's development allocation to the district.[24]

Table 1 gives the description of the main variables for the period 1996–2014.

[20]The population of Nepal in 1991 was around 18.57 million and in 2011 it was around 26.5 million.

[21]The dataset is available for download at AMP (Aid Management Platform) maintained at the website of Ministry of Finance, Nepal. The relevant link is: http://data.opennepal.net/content/amp-aid-data-apr-17-2014.

[22]A project is classified as "active" within a certain duration (say 1996 to 2006) if the "start date" for the project lies within that period.

[23]First, for the calculation of the foreign aid we exclude the projects that were national in nature, since we have no way of knowing if they targeted any specific districts. Secondly, among the projects that were not national but covered more than one district, since we do not know the per district allocation, we use the average amount per district by dividing the total allocation by the number of districts targeted.

[24]Ideally, we would have like to have annual budgetary allocations by the Government, however these documents are not all digitized, so not easily available for all years.

	1996 – 2006				2007–2014			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Total Killed per 1000 persons	0.951	0.991	0.000	5.756	0	0	0	0
Total Killed by State per 1000 persons	0.624	0.744	0.000	4.673	0	0	0	0
Total Killed by Maoists per 1000 persons	0.327	0.281	0.000	1.401	0	0	0	0
Per capita allocation of Foreign aid	1.827	4.193	0.006	22.158	14.019	49.348	0.823	408.456
Number of Foreign aid projects	0.503	0.205	0.100	1.100	9.676	2.993	5.000	20.571
Per capita DDA	5.957	8.941	1.870	71.530	11.325	20.010	3.070	165.320
Poverty Headcount Rate	0.683	0.201	0.164	1.000	0.352	0.175	0.046	0.824
Poverty Gap	0.271	0.142	0.037	0.579	0.072	0.056	0.004	0.255
Poverty squared gap	0.135	0.095	0.012	0.373	0.025	0.025	0.001	0.131
Polarization (Esteban-Ray measure, Alpha=1)	0.027	0.017	0.007	0.108	0.016	0.010	0.002	0.066
Polarization (Esteban-Ray measure, Alpha=2)	0.013	0.011	0.002	0.064 0.007	0.006	0.001	0.037	
Polarization (Esteban-Ray measure, Alpha=3)	0.007	0.007	0.001	0.039 0.003	0.003	0.000	0.021	
Gini Index	0.271	0.074	0.089	0.474	0.265	0.054	0.161	0.429
Atkinson 1	0.122	0.063	0.014	0.345	0.113	0.044	0.045	0.268
Atkinson 2	0.210	0.093	0.027	0.516	0.202	0.071	0.081	0.434
Generalized entropy 0	0.133	0.075	0.014	0.423	0.121	0.051	0.046	0.313
Generalized entropy 1	0.145	0.088	0.014	0.410	0.129	0.060	0.045	0.334
Generalized entropy 2	0.194	0.158	0.015	0.761	0.165	0.111	0.045	0.740
Polarization (Foster-Wolfson measure)	0.175	0.073	0.043	0.431	0.124	0.069	0.000	0.420
Average per capita expenditure	6,801	2,549	3,220	18,191	5,235	1,193	2,312	8,218

Table 1: Descriptive Statistics (1996–2006). *Notes:* The information on conflict is from Do and Iyer (2010). The aid data is from the Government of Nepal's Aid Portal and the inequality and polarization measures are computed on the basis of the data from NLSS Round I conducted during 1995-96 and NLSS Round III conducted during 2010-11. The per capita District Development Fund and per capita allocation of foreign aid are stated in USD.

From the columns pertaining to 1996–2006, it is evident that per capita District Development Allocation (DDA) is larger, on average, than the per capita foreign aid allocation during this period. Further, there is on average less than one project (the exact number being 0.503) active in a given year in any particular district.

In contrast, the later columns in Table 1 shows that in the post-conflict period per capita DDA is smaller than per capita foreign aid allocation though both have risen compared to the previous period. Note, the number of projects increased to almost 20 times of their previous value. Here the average number of projects financed by foreign aid in a district per year is above 9.6. These averages are indicative of the fact that in the post-conflict period foreign aid has been a significant factor in the development in this region.

Also note that there has been a large decline in poverty across these two periods; the poverty headcount shows a drop from about 68% to 35%. In contrast, the inequality and the polarization numbers show lesser change.

We treat foreign aid funded projects at par with DDA funds which are directly allotted by the Government of Nepal. That is to say, in our subsequent empirical analysis, we assume that the implementation of foreign aid funded projects are, to a large extent, in the hands of the Nepal government. The following lines from an official report from the Ministry of Finance (Government of Nepal) in 2014 bear testimony to this (italics inserted by us):

"International development assistance continues to play a significant role in supporting socio-economic development of Nepal. Lately, the development cooperation contributes about 20 percent in the annual budget and it is the major financing source for development projects *implemented through the Government of Nepal*. In this respect, development partners' information is equally important for planning, coordinating and effective utilization of the development assistances ... The Ministry of Finance is putting its best efforts to enhance aid effectiveness through greater transparency and efficient utilization of development assistances."

The last line of the quoted text betrays the concern that the foreign donors had been raising: namely, that they could *not* get a clear perspective of how the funds they were sending to Nepal were getting utilised. This strengthens our belief that the Nepalese government had in fact significant say over the allocation and use of these funds.

We now move on to the details of our empirical strategy for the identification of the relevant parameters.

3.2 Empirical Specification

Given the data at our disposal, we utilize both cross-sectional and panel data models.

We have a two period panel where we use data from the NLSS I (1995-96) and NLSS III

(2010-11) to get the pre- and post-conflict levels of poverty and inequality. With these we combine the foreign aid allocation 1996-2006 (for the first period of the panel) and the post-conflict that is the period 2007 onwards (for the second period of the panel). Since we are interested in the effect of conflict on various outcomes, a certain amount of lagging is necessary. Hence for the first period, that corresponds to NLSS I (1995-96) we have zero conflict in all districts. For the second period, we use the conflict numbers per district as described above in Table 1; so these vary across districts and are from 1996–2006.

Using these our main specification is the standard OLS with fixed effects which can be stated as the following:

$$y_{dt} = \alpha_d + \gamma_t + \beta \mathbf{X}_{dt} + \rho \mathbf{Z}_{dt} + \epsilon_{dt}$$

where y_{dt} is some measure of aid that is made available to district d at period t. This variable can be either the number of projects funded by foreign aid in that district (averaged over the years in that period) or it may be per-capita allocation of foreign aid to the district or the per-capita allocation of government aid (DDA) to the district.

$\mathbf{X}_{dt}$ is a vector of variables that describe the conflict in the district (hence, one of the following: numbers killed per 1000 in total, by the state, by the Maoists, conflict events based on the GDELT dataset).

$\mathbf{Z}_{dt}$ is a set of time-varying demographic and socio-economic controls and includes the measures of inequality or polarization. α_d represents the district fixed effects while γ_t captures the time effect. Here ϵ_{dt} is the error term which is clustered at the district level.

It is important to bear in mind that all measures of conflict for every district are *zero* in the first period while they vary by district in the second. So measures of aid in period 1 (which goes from 1996 to 2006) are a function of prior conflict (zero by definition since there was no civil conflict before 1996) and the measures of aid in period 2 (which goes from 2007 to 2014) are a function of prior conflict (so the aggregate non-zero conflict numbers from the 1996–2006 period). This lagging is necessary as we are interested in the effect of conflict on subsequent aid distribution.[25]

One may view this panel specification as a sort of *difference-in-differences* model where the treatment is conflict (in particular, the different intensities of conflict). The districts with zero/low intensities of conflict can be thought of as the "control" group while those with moderate/high levels of conflict are the "treated" group. Of course, this "treatment" is not randomly assigned; hence, it is important to control for any pre-treatment differences between these groups. Earlier studies have identified poverty, inequality, polarization and

[25]One could raise the concern that perhaps foreign aid during 1996–2006 was dampened particularly in conflict-prone districts and hence it would be appropriate to use foreign aid data from years prior to 1996. However, district-wise data on aid disbursement is not available prior to 1996. However, the aggregate figures for Nepal suggest that the amount of foreign aid during the years before 1996 was not substantial, particularly when compared to the period 2007 onwards. Moreover, we try to address the issue of potential reverse causation by our 2-SLS IV approach.

geography as being correlated with conflict. So, we account for these factors in our regressions to control for "pre-treatment" differences — the time-varying factors are explicitly employed as controls while the time-invariant ones are subsumed in the district fixed effects.

An alternative specification we use is the cross-sectional OLS model in which we examine how the change in development aid provided to the district is affected by the intensity of conflict that the district previously witnessed. Here we control for the initial poverty or inequality of the district. The advantage of this specification is that we can directly see how differences in conflict levels across the districts is related to directing more resources towards it. Our main specification here is:

$$\Delta y_d = \beta C_d + \gamma P_d + \rho \mathbf{Z}_d + \epsilon_d$$

where Δy_d is the change in allocation of aid to district d, C_d is the measure of conflict intensity for district d, P_d is the poverty or inequality in 1995 and $\mathbf{Z}_d$ is a set of demographic and geographic controls. Note, ϵ_d denotes the error term for the cross-sectional specification.

3.3 Results

In our theoretical model, we argued that the poorer groups would provide greater support to the Maoists, regardless of the latter's motivations. In our empirical exercise, we interpret the extent of conflict in the area as evidence of support for the Maoists. To see why such an interpretation may be valid, consider the following evidence. In column 1 of Table 2, we first present a key result from Do and Iyer (2010). Here, we see the robust positive correlation between initial poverty and the subsequent intensity of conflict which Do and Iyer (2010) emphasised. In fact, they interpret this as supportive of the opportunity cost view of conflict, whereby higher poverty makes recruitment cheaper for the Maoist groups. Notice, this is also in line with the mechanism in our theory.[26]

This idea is further bolstered by another result in Do and Iyer (2010) — namely, a positive and statistically significant relation exists between the pre-conflict poverty rate (1995-96) and the conflict deaths caused by the Government forces.[27] Clearly, the State would retaliate where resistance exists suggesting that poorer districts did have a pro-Maoist stance.

Columns (2) and (3) in Table 2 have post-conflict poverty (measured in 2010-11) as the dependent variable. These regressions suggest that there is *no* correlation between the intensity of conflict and *subsequent* district-level poverty. In other words, the positive correlation which existed between conflict and poverty measured prior to conflict disappears when we look at poverty levels in the post-conflict period. This suggests that those poor districts which had experienced more conflict may have induced targeting so as to gain relative to other districts

[26] Additionally, Do and Iyer (2010) discuss how high levels of poverty lead to a greater level of grievances against the government, and hence more support for the rebel groups.

[27] The coefficient is 0.772 and is statistically significant at the 1% level.

	[1]	[2]	[3]
	Replication	**2011 data**	**2011 data**
Conflict deaths per 1000 population		0.042	0.024
		(0.030)	(0.032)
Poverty rate 1995-96	1.106***		
	(0.354)		
Maximum elevation ('000 meters)	0.067***	0.013*	0.029***
	(0.020)	(0.007)	(0.010)
Proportion of forested area	1.591***	0.129	0.231**
	(0.502)	(0.098)	(0.096)
Access to motorable road			-0.026
			(0.100)
Ethnicity dummies	No	No	Yes
Number of observations	71	70	70
Adjusted R^2	0.342	0.142	0.235

Table 2: OLS CROSS-SECTION: CORRELATIONS BETWEEN CONFLICT AND POVERTY. Column 1 uses Do and Iyer (2010) data and replicates their result with conflict as the main dependent variable. Column 2 and 3 have poverty in 2010-11 as the dependent variable. All regressions have the robust standard errors in parentheses.

— in other words, conflict may have affected economic conditions in a direction *distinct from one involving loss and destruction* (from fighting).[28]

We first provide a visual representation of our baseline specification. Figure 1 contains a two–way scatterplot with a fitted line where the number of Foreign Aid-funded Projects is plotted against the total incidences of conflict in the district; this is done after removing district–, time– and population effects. The basic pattern indicates a positive relationship. And this is what we test repeatedly in various specifications in the analysis that follows.[29]

Our baseline results for the panel specification are collected in Table 3. The dependent variable in the first two columns is the per-capita District Development Allocation (DDA). In the remaining columns it is based on the foreign aid allocations; specifically, in columns (3) and (4) it is the per-capita allocation of foreign aid and in columns (5) and (6) it is the average number of foreign-aid funded projects per year in the district. It is important to bear in mind that the conflict measure is the same (equals 0) across the districts in the first period and varies across the districts in the second period. Hence, the coefficient on the conflict variable has to be interpreted accordingly.

[28] Another way to demonstrate this lack of correlation in the post-conflict period is by looking at the effect on poverty in a panel setting in the spirit of a difference-in differences approach that we adopt. This can be found in Table 13 in the Appendix.

[29] The Appendix contains similar figures for two other measures of conflict: *casualties by the State* and *casualties by the Maoists*.

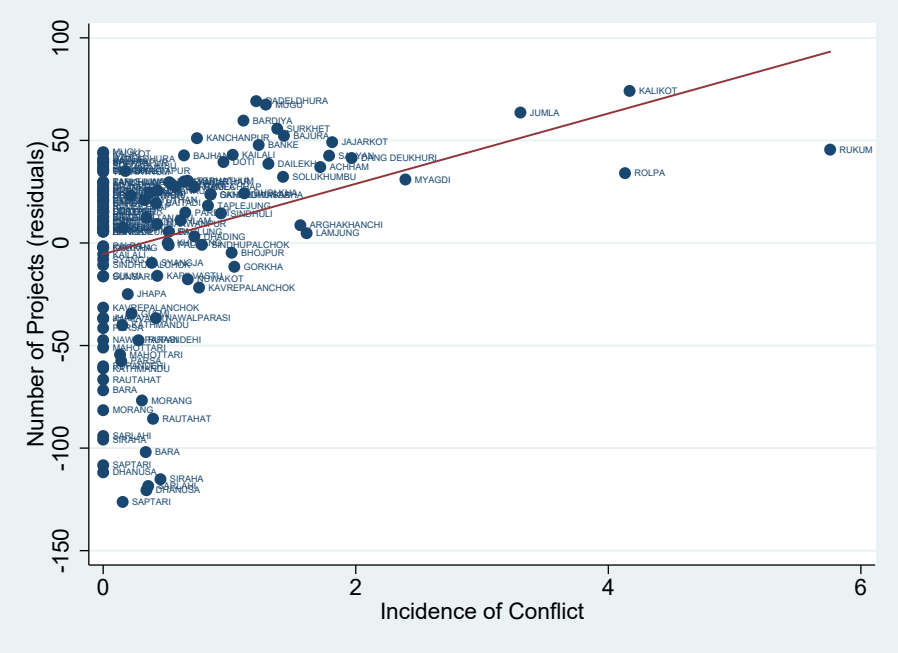

Figure 1: Number of Foreign Aid-funded Projects and Total Conflict. The vertical axis plots the residual of number of Foreign Aid-funded Projects in the period following conflict after district–, time– and population effects have been removed. The horizontal axis plots the total incidences of conflict in the district. So each district appears twice in the figure (once for every period).

	DDA		Aid Allocation		Aid: No. of Projects	
	[1]	[2]	[3]	[4]	[5]	[6]
Conflict deaths per 1000 population	0.287	1.343	19.974	19.841	0.836***	0.856***
	(1.116)	(1.450)	(17.712)	(15.815)	(0.232)	(0.199)
Av. Per-capita expenditure		-0.002**		0.002		-0.000
		(0.001)		(0.001)		(0.000)
Headcount of poverty		-13.316*		50.408*		-1.281
		(7.553)		(30.001)		(1.503)
Ethnic group sizes	N	Y	N	Y	N	Y
Population	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140
Adjusted R^2	0.305	0.479	0.224	0.344	0.941	0.952

Table 3: OLS Fixed Effects regressions. Sources and Notes: Columns [1] and [2] have DDA per capita as the dependent variable. Columns [3] and [4] have per capita foreign aid allocation and columns [5] and [6] have the number of projects as the dependent variable. Robust standard errors clustered by district are given in parentheses.

The results, by and large, show a positive association between intensity of conflict and the aid allocation. This is particularly valid for the regressions with *the number of foreign-aided projects* as the dependent variable (columns (5) and (6)). The positive and significant coefficients indicate that as conflict increases within a district there is an increase in foreign-aid funded projects allotted to that district. This is tantamount to saying that those districts which experienced *greater* levels of conflict had more foreign-aid funded projects allotted to them afterwards.

One needs to weigh the different outcome variables in terms of their ability to capture what we intend to measure. Both DDA and the foreign aid allocations are *allocations* and not actual expenditure undertaken whereas the number of foreign-aid funded projects refer to projects which are *active* in the districts. In this sense, the latter is a more accurate measure of transfers made to the districts. In our view, the concerns of endogeneity are substantially lower in the regressions with foreign aid variables as compared to DDA funds. Notice, we lag the conflict measures so as to mitigate concerns of reverse causation in any case. But one may argue that conflict took place — in part — to capture these funds as warring groups need financial resources during conflict. In this respect, using the foreign aid data (rather than DDA) is desirable because of two reasons: (i) There was very little foreign aid in the period before/during conflict while the aid increased substantially after the end of conflict and (ii) the extent of appropriation by the contesting groups must be lower for foreign aid as compared to DDA as there is some amount of accountability to the foreign donors.

	DDA		**Aid Allocation**		**Aid: No. of Projects**	
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Killed by state per 1000 population	1.632		23.481		1.074***	
	(1.935)		(19.990)		(0.280)	
Killed by Maoists per 1000 population		5.065		79.222		2.989***
		(4.680)		(56.708)		(0.784)
Av. Per-capita expenditure	-0.002**	-0.002**	0.002	0.002*	-0.000	-0.000
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Headcount of poverty	-13.330*	-12.993*	50.539	54.739*	-1.308	-1.050
	(7.567)	(7.495)	(31.630)	(30.506)	(1.534)	(1.445)
Ethnic group sizes	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140
Adjusted R^2	0.478	0.481	0.316	0.389	0.951	0.952

Table 4: OLS Fixed effects Regressions: Alternative definitions of conflict. Sources and Notes: Columns [1] and [2] have DDA per capita as the dependent variable. Columns [3] and [4] have per capita foreign aid allocation and columns [5] and [6] have the number of projects as the dependent variable. Robust standard errors clustered by district are given in parentheses.

One could ask how conflict support for Maoists in the theory maps to casualties from conflict in the data. In particular, one could argue that casualties suffered by the Maoists at the hands of the State is a better proxy. Alternatively, one could argue that casualties inflicted by the Maoists actually constitute a better measure. We are agnostic about this and hence report results for all the three different measures: total, killed by State and killed by Maoists.

Table 4 presents some such regressions estimated with conflict variables that measure number of people killed by state and Maoists separately. These regressions show that our basic relation between conflict intensity and aid-related variables are unchanged: larger the rise in conflict (howsoever measured) over the two periods, the greater is the increase in foreign-aid funded projects allotted to that district.

Recognizing that inequality or polarization within a district may affect both the intensity of conflict and the number of foreign-aided projects, we include different measures of such in our regressions. Table 14 (in the appendix) shows that our results are robust to using several other measures of poverty, inequality and polarization.

One concern may be that the link between conflict intensity and aid-induced projects that we document may be explained by a story linking poverty and aid allocation. So, one need not have the implicit *quid pro quo* theory that we propose. Specifically, one may argue that once Maoists joined the government they influenced aid allocation in a manner so as to benefit poorer districts: simply directing aid to those who perhaps need it the most. Given the positive correlation between conflict intensity and pre-conflict poverty, this explanation would be entirely consistent with our reported findings so far.

We try to check whether it is conflict intensity *per se* which affects aid-induced projects or whether conflict is simply proxying for poverty. In our regressions (see e.g., Tables 3 and 4) we explicitly control for some measure of poverty alongside our measures of conflict. It turns out that the coefficient on the poverty variable is not stable whereas the sign and significance of the coefficient on the conflict variables is stable across the different specifications. In Table 14 (in the appendix), however the coefficient on poverty is not significant across various specifications in stark contrast to the positive and significant coefficients on the conflict variable. These results suggest that it is not poverty *via the channel of conflict* which explains the pattern of aid-funded project growth but conflict intensity in and of itself.

Rather than looking at all the projects collectively, one could divide them according to the sector towards which the funds are targeted. So we have divided the total into seven (disjoint) categories: (i) agriculture, (ii) communication, (iii) infrastructure, (iv) education, (v) health, (vi) institutional and (vii) general development. Such an exercise serves two purposes. First, we can examine the sector-wise heterogeneity if any. Next, we are interested to see whether the effects are largely driven by reconstruction efforts. Once could argue that conflict-prone areas suffered heavy damages to infrastructure and institutional buildings (government offices, police stations) and hence it could be rebuilding of these which is driving our results and not the *quid pro quo* — story which we posit. The results are collected in Table 5.

	Agriculture	**Communication**	**Development**	**Education**	**Health**	**Infrastructure**	**Institution**
Conflict deaths per 1000 population	0.286***	-0.013***	0.254***	0.150***	0.143**	0.033	0.003
	(0.047)	(0.004)	(0.070)	(0.052)	(0.071)	(0.037)	(0.022)
Av. Per-capita expenditure	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Headcount of poverty	0.332	-0.050	-0.569	-0.024	-0.654	0.008	-0.324*
	(0.450)	(0.051)	(0.578)	(0.274)	(0.514)	(0.280)	(0.187)
Ethnic group sizes	Y	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140	140
Adjusted R^2	0.893	0.404	0.907	0.888	0.919	0.894	0.950

Table 5: SECTOR SPECIFIC AID ALLOCATION. Sources and Notes: We have divided the total number of projects into seven broad categories: agriculture, communication, infrastructure, education, health, institutional and general development. Each column has the dependent variables as the specific sectoral project numbers. Robust standard errors clustered by district are given in parentheses.

We see that the results for the number of projects (Tables 3, 4 and 14) are replicated for most sectors except for three sectors: 'infrastructure', 'institution' and the 'communications' sectors. In the 'infrastructure' and 'institution' categories we see no statistical significance at the 10% level. This serves to allay our concern that conflict-damaged reconstruction projects are driving our results. For the 'communications' sector we see a significant effect but with the opposite sign. Specifically, higher conflict resulted in lesser projects pertaining to communication. One explanation for this could be that the Maoist parties felt that they needed to broadcast their ideology and agenda to places which they had lesser access to earlier (and hence these places were involved in the conflict to a lesser extent). Some evidence points towards such a policy (see Miklian (2009)).

	[1]	[2]	[3]	[4]
Conflict deaths per 1000 population	0.692***	0.544**		
	(0.245)	(0.238)		
Deaths caused by state per 1000 population			0.577*	
			(0.294)	
Deaths caused by Maoists per 1000 population				2.462**
				(0.933)
Headcount of poverty in 1995-96	-1.272	-2.235	-2.221	-2.413
	(2.071)	(2.421)	(2.441)	(2.369)
Linguistic polarization 1995-96		0.754	0.770	0.600
		(1.569)	(1.582)	(1.547)
Caste Polarization 1995-96		0.106	0.269	0.205
		(4.256)	(4.315)	(4.105)
Infant mortality 1995-96		0.028**	0.029**	0.026*
		(0.014)	(0.013)	(0.014)
Elevation max		-0.544***	-0.541***	-0.549***
		(0.132)	(0.132)	(0.130)
No. of Project 1996-2006	0.256	0.311*	0.303*	0.318*
	(0.192)	(0.169)	(0.170)	(0.166)
Population	Y	Y	Y	Y
Number of observations	70	70	70	70
Adjusted R^2	0.122	0.287	0.278	0.308

Table 6: Cross-sectional OLS regressions.The change in foreign aid (number of projects) over the two periods (2007–2014 and 1996–2006) is the dependent variable in all columns. Robust standard errors are given in parentheses.

We now turn to the estimates from our cross-sectional regressions. Table 6 contains some of the main results. In all of the reported regressions in this table, the dependent variable is the change in the number of foreign aid–funded projects. The main explanatory variable

of interest is *Conflict deaths per 1000 population* and this is from the period 1996–2006. We see that districts with higher intensity of conflict had more foreign aid projects allotted to them. This is true for all the three different measures of conflict intensity based on casualties (*total*, *killed by the State* and *killed by the Maoists*).

The results are also robust to alternative measures of poverty and inequality (see Table 15 in the appendix).

3.3.1 Motives of the Maoists

Our theory considered two alternative motivations for the Maoists — (i) the clientelistic, rent-seeking agent who provides conflict "compensation" strategically and (ii) the benevolent social planner who tries to maximise aggregate citizen welfare. No doubt, the truth is somewhere in between these two poles but one of our aims in this paper is to uncover in which *direction* it lies.

According to our theory, if M is indeed driven largely by private concerns then poor groups who supply more conflict effort should receive compensation but not as much as their richer $M-$ supporting counterparts. This, in turn, implies that the effect of conflict support on poverty will be limited under motivation (i). On the other hand, if the Maoists were to behave as the benevolent planner then they would target more resources to the poor conflict-prone groups which would reduce poverty.

A similar logic extends to the issue of the impact of conflict on inequality: an M driven by private gains would have limited impact on inequality (see Observation 2 and Proposition 1). However a benevolent planner-type M would target more resources towards poorer groups in an absolute sense and if anything reduce inequalities.

In Table 7, we report some results where the dependent variable is some measure of poverty or inequality (both measured at the district–level) and the main independent variable of interest is our familiar measure of conflict (deaths). In columns (1) — (6) of this table, the coefficient on the conflict variable is not statistically significant even at the 10% level. This lack of correlation between conflict-proneness and poverty/inequality suggests that the allocation of aid less driven by concerns of social welfare and more by strategic considerations.

To push this line of argument further, we look at another commonly used proxy of economic activity at the sub-national level — namely, the amount of night-time lights. Our measure of night-time light is from satellite images from the US Air Force DMSP and its Operational Linescan System.[30]

[30]The satellites circle the Earth 14 times each day and record Earth-based lights with their Operational Linescan System for grid cells of 30 arc-seconds (corresponding to approximately 1 square kilometer). The entire planet between latitudes 65 degrees N and 65 degrees S is covered. From 1992 and onwards, these data were digitalized and made publicly available.

	Poverty			Inequality			
	[1] *Headcount*	**[2]** *Poverty Gap*	**[3]** *Sq. Gap*	**[4]** *Gini*	**[5]** *Atkinson*	**[6]** *Foster-Wolfson*	**[7]** *NTL*
Conflict deaths per 1000 population	0.019	0.005	0.000	-0.004	-0.004	-0.013	-0.017
	(0.017)	(0.010)	(0.007)	(0.010)	(0.007)	(0.015)	(0.040)
Av. Per-capita expenditure	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ethnic group sizes	Y	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140	140
Adjusted R^2	0.847	0.868	0.801	0.119	0.117	0.306	0.688

Table 7: Poverty and Inequality: OLS Fixed Effects regressions. Sources and Notes: Columns [1] — [3] have different measures of (district-level) poverty as the dependent variable, specifically, the Headcount Ratio, the Poverty Gap and the Poverty Squared Gap. Columns [4] — [6] have different measures of (district-level) inequality as the dependent variable, specifically, the Gini, the Atkinson Index and the Foster-Wolfson index of polarisation Column [7] has the average night-time lights as the dependent variable. Robust standard errors clustered by district are given in parentheses.

Several recent studies have provided empirical evidence showing that night-time light corresponds well to economic activity and well-being in other contexts (see e.g., Henderson, Storeygard, and Weil (2012), Michalopoulos and Papaioannou (2013), Alesina, Michalopoulos, and Papaioannou (2016)). Based on the data we have, we interpret the average amount of light as an indicator for general economic development.

One key advantage of this measure is that it captures all potential variations even in the short-run. Hence, in principle it is less sluggish than other measures of economic activity/ well-being. So while poverty and inequality may be slow to change, the measure of night-time lights would be able to pick up short-term variations.

To construct this variable, we take the average annual night-time lights over 3 years for each round in each of the districts in our sample. Specifically, for the first wave (corresponding to NLSS I in 1995-1996) we take the average over 1993–1995 and for the second wave (corresponding to NLSS III in 2010-2011) we use the average over 2010–2012.[31] We report the effect of conflict on night-time lights in column (7) of Table 7. As with the case of the various poverty and inequality measures, night-time lights does not seem to be affected by the extent of conflict recorded in the district. For the sake of completeness, we re-run the baseline regressions reported in Table 3 with our variable *night-time lights* in place of the headcount of poverty measure. The results are substantially similar — see Table 12 in the Appendix.

All in all, these results suggest a strategic motive for the Maoists rather than that of a benevolent social planner's.

3.4 Additional robustness checks

3.4.1 The role of elections

It may be argued that the distribution of resources may be basically dependent upon how successful the left parties were in the elections post–conflict. In particular, in places the left were electorally successful *in relation to their pre-conflict position* there would be higher channeling of funds and projects. If the success of such parties were indeed higher in districts which witnessed more conflict, then our results could simply be a reflection of greater targeting by the left rather than any (implicit) compensation for conflict–support.

We use data from two elections: one in 1994 which is prior to the start of conflict and the other in 2008 which is after the conflict had ended.

We start by creating different measures of left electoral presence. In particular, we employ two definitions of "leftist" parties: one is a rather stringent one while the other is more

[31] It is important to bear in mind that all measures of conflict for every district are *zero* in the first period while they vary by district in the second; hence, the timing of the night-time lights variable.

lenient.

	[1]	[2]	[3]	[4]
Conflict deaths per 1000 population	0.894***	0.915***	0.801***	0.848***
	(0.192)	(0.205)	(0.217)	(0.231)
Left seatshare	-0.026			
	(0.033)			
Ultra-Left seatshare		-0.049		
		(0.070)		
Left voteshare			0.010	
			(0.025)	
Ultra-Left voteshare				0.001
				(0.025)
Av. Per-capita expenditure	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Headcount of poverty	-1.099	-1.036	-1.180	-1.158
	(1.717)	(1.758)	(1.721)	(1.759)
Ethnic group sizes	Y	Y	Y	Y
Population	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y
Number of observations	138	138	138	138
Adjusted R^2	0.951	0.951	0.951	0.951

Table 8: OLS Fixed Effects regressions: Left electoral presence. Sources and Notes: All columns have the number of projects as the dependent variable. The left parties performance is measured in four different ways; first, we categorise the left parties into two groups on the basis of their stated ideologies — *Left* and *Ultra-left*. Next, we look at their share of votes in the district and also the number of seats they won in a district. We utilise the 1994 and the 2008 elections for these measures. Robust standard errors clustered by district are given in parentheses.

We call a party "Ultra-Left" if it stood for militant leftist ideology and in fact were active in the Maoist war. A party is coded as "Left" if it simply promoted a leftist ideology without necessarily being directly involved with the Maoist war. Note, only a breakaway faction of the Communist Party of Nepal (led by Prachanda–Bhattarai) actually took up armed struggle; so such a faction would be both *Ultra-left* and *Left* while a "moderate" party like Communist Party of Nepal (UML) is coded as *Left* but not *Ultra-left*. Apart from CPN (Maoist), we included the following parties under *Ultra Left* because they were legal fronts for more extremist leftist ideology: *Janamorcha* and *Rastriya Janamorcha* (for the 2008 elections) and *Samyukta Janamorcha Nepal* and *Nepal Janavadi Morcha* (for the 1994 elections).

For each of these *Left*/*Ultra-left* parties in each election (1994 and 2008), we created two

different variables at the district level: one is the share of seats won by these parties and the other is the total share of votes won by these parties. These two measures are indicators of the electoral presence of the *Left/ Ultra-left* parties in each election period.

Table 8 contains some regressions where these different measures of *Left/ Ultra-left* electoral presence is included as an additional control. Columns (1) and (2) have the shares of the seats won by the *Left* group and the *Ultra-left* group respectively as the political control variables. Columns (3) and (4) use the shares of votes of these parties. Interestingly, the coefficients on these variables are not statistically significant at the 10% level in these specifications.[32] Notice, the inclusion of such variables does not alter our main findings in any way: the coefficient on the conflict variable remains positive and significant throughout.

3.4.2 Alternative measures of conflict

As mentioned earlier, we also use a second source of data on conflict to validate our results. This is from the Global Database of Events, Language and Tone (GDELT) Project. For our purposes, we created (a subset of) the GDELT database of events pertinent to internal conflict in Nepal from 1995–2011. The database consists of 37,689 observations[33]. We use the following GDELT event codes: 07 ("Provide Aid"), 14 ("Protest"), 15 ("Exhibit Force Posture"), 18 ("Assault"), 19 ("Fight") and 20 ("Use Unconventional Mass Violence").[34]

Table 9 is the exact counterpart of the table containing the baseline results (Table 3); so there is a column-by-column correspondence.

From Table 9, we can see that the basic pattern that has been documented so far continues to hold up when using this new measure of conflict intensity. Moreover, the coefficients on the conflict variable are positive and significant for not just the number of foreign aid-funded projects; in fact, it is so for the Nepal government's development funds (DDA) and the foreign aid allocations variables as well (see columns (1)—(6)). Overall, this serves to allay our concerns as to whether the relation between conflict (which we measure by casualties in the INSEC dataset) and aid was owing to some specific features of the INSEC dataset.

We also replicate the results for the sectoral divisions (*a la* Table 5) to check whether a similar pattern holds. It turns out that even when using the GDELT data, the effects are quite similar. The table is provided in the Appendix (see Table 16). Next, we check whether the electoral performance of the Left parties have any influence on the coefficients on the GDELT–based conflict variables. We present regressions which are in the spirit of Table 8. Table 17 in the appendix contains some of these results. The coefficient on the conflict

[32]This of course does not establish that political considerations did not have a role. We plan to take up this matter seriously in a related paper.

[33]While the original database consisted of 42,221 observations pertaining to the above-mentioned event codes in Nepal, only those geo-coded according to the geographical co-ordinate system within the Nepalese territory have been selected for analysis.

[34]See the GDELT codebook here: http://gdeltproject.org/data/lookups/CAMEO.eventcodes.txt

	DDA		Aid Allocation		Aid: No. of Projects	
	[1]	[2]	[3]	[4]	[5]	[6]
Conflict (GDELT)	0.006***	0.006***	0.003*	0.008*	0.000***	0.001***
	(0.001)	(0.001)	(0.002)	(0.004)	(0.000)	(0.000)
Av. Per-capita expenditure		-0.000		0.006*		0.000*
		(0.000)		(0.004)		(0.000)
Headcount of poverty		-8.194		68.070		-0.265
		(6.246)		(45.512)		(1.505)
Ethnic group sizes	N	Y	N	Y	N	Y
Population	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140
Adjusted R^2	0.808	0.815	0.084	0.237	0.938	0.953

Table 9: OLS Fixed Effects regressions: Alternative Measure of Conflict. Sources and Notes: Conflict is measured using data from GDELT. Columns [1] and [2] have DDA per capita as the dependent variable. Columns [3] and [4] have per capita foreign aid allocation and columns [5] and [6] have the number of projects as the dependent variable. Robust standard errors clustered by district are given in parentheses.

variable using the GDELT data continue to be positive and significant as in the baseline case (Table 8); moreover, it is true also for the Nepal government's development funds (DDA) and the foreign aid allocations variables.

3.5 2-SLS IV analysis

We have so far interpreted our OLS fixed effects regression results as a difference-in-differences analysis in the spirit that conflict-related deaths is like a "treatment". To account for the fact that this "treatment" is not randomly assigned across districts, we tried to control for various factors which are systematically different in these two sets of districts: namely, the *treated* and the *control*.[35] To further move in the direction of a causal interpretation of conflict on resource–redistribution, we employ a *two-stage least squares IV analysis*.

One of the important sources of funds for the Maoists came from the control of timber smuggling to India (see ICG (2005)). This idea is echoed in the following excerpt:

"The Nepal army and the Maoists needed forest products to maintain their presence in rural

[35]We controlled for various correlates of conflict as identified in the literature. There is no possibility of checking for a "parallel trends" assumption due to the lack of disaggregated data on foreign aid prior to 1996.

areas. They needed fuel-wood and grazing for animals and timber for construction, whilst the Maoists needed timber to sell as a source of revenue" (LFP (2010)).

This is *precisely* the channel we seek to exploit in terms of developing an instrument for our conflict measure(s) at the district level. The returns from smuggling timber to India would naturally depend on the prices for the various types of timber in India. Moreover, the ecology (specifically, the elevation and vegetation) varies considerably across the different districts of Nepal. However, the type(s) of timber a district can offer is clearly a time-invariant entity. However, the prices of these — in India — *do* vary over time. Thus, a weighted index of these prices at the district-level — where the weights come from the proportion of the district vegetation falling into one of the ecological categories (more on this below) — would be a measure of the funding sources of the Maoists from the district at a point in time. Insofar the price movements in timber in India are independent of the aid disbursements/targetted transfers in Nepal (our outcome variables), such a weighted index would be exogenous and hence allow for improved identification of the effects. It is plausible to assume that price movements for different types of timber in India are driven by factors internal to India rather than economic conditions in Nepal.

The International Centre for Integrated Mountain Development (ICIMOD) has established a Regional Database System (RDS) that acts as a central data repository for different thematic areas in the Hindu Kush Himalayan (HKH) region and provides access to these data through the RDS portal. The map of the ecology of Nepal prepared by ICIMOD provides the digital polygon data of ecology (elevation and vegetation zones) for the country in 2003.[36] This dataset has been used to assess district-wise spread of timber resources in Nepal. To that end, the vegetation types in the ICIMOD dataset were broadly classified further into coniferous, non-coniferous and non-coniferous tropical forests.[37] The International Tropical Timber Organization (ITTO) divides the price of timber into these very same categories (coniferous trees, non-coniferous trees and non-coniferous tropical trees).[38] We use these price data along with the above-mentioned ecology data to construct our proposed instrument for district-level conflict.

This brings us to the question as to the partial correlation between our proposed instrument and the measures of conflict. Say, a rise in the price of the relevant timber types in India imply greater resources for the Maoists. But what is the resultant effect on conflict? Does it increase or decrease? In principle, the effect could go either way. It would depend upon the military strategies of the warring groups. Thus, we treat it as an empirical question which would resolve itself in the first-stage regressions.

The idea behind our instrument is similar in spirit to the strategy employed in Libois (2016)

[36]This is based on the Dobremez Maps series published in France from 1970 to 1985. (Website publication date of the map: 2014-11-04T15:00:24, Standard Name: ISO 19115:2003/19139)

[37]The classification has been performed using the ecological tables provided here: http://lib.icimod.org/record/22584/files/c_attachment_178_3632.pdf.

[38]We are grateful to Francois Libois for sharing the data on the timber prices.

but there are some clear distinctions. Libois (2016) constructs a similar variable at the Village Development Committee (VDC) level and interacts this variable with the inverse of the distance of the VDC to India. The instrument in his case is this *interaction term* and not simply the weighted index which we use.

Now we turn to our results from this 2SLS-IV analysis. Table 10 contains some of the results. Column 1 reports the first-stage regression where conflict intensity is regressed on our weighted index ((log) Value of Wood) and the other controls. The coefficient on the instrument is negative and significant with an $F-$ statistic above the conventional threshold of 10. This indicates that our instrument is *not* weak.

The negative partial correlation seems to suggest that areas where the Maoists got access to more funds ("deeper pockets") — through an increase in the timber prices in India — saw a reduction in violence. This is akin to a "deterrent" effect as perhaps the government forces thought best against taking the battle to the (financial) strongholds of the insurgents.

The second-stage results are reported, in turn, for all three outcome variables: the Nepal government's budgetary development allocation (DDA), the foreign aid allocation and the average number of foreign aid-funded projects. Columns 2 – 4 report the results. In all of them, the effect of conflict on aid howsoever measured, is positive and significant. Moreover, it is so for the Nepal government's budgetary development allocation (DDA) and the foreign aid allocation variables which is contrast with the previous OLS fixed effects results. Columns 5 and 6 report the results for conflict deaths by the State and by the Maoists, respectively, for the average number of foreign aid-funded projects as the outcome variable. We note that basic results are the same. Observe that the $F-$ statistics from their first-stage regressions are again in excess of 10.

Table 18 in the appendix contains regressions pertaining to conflict deaths by the State and by the Maoists, respectively, for the other two outcome variables: the Nepal government's budgetary development allocation (DDA) and the foreign aid allocation. The results are in line with the ones discussed above.

The timber industry is quite relevant as providing a means of livelihood in parts of Nepal. This suggests that – in principle – there could be a potential *direct* link between timber prices and aid allocation, thereby threatening our exclusion restriction. Moreover, our first-stage partial correlation is negative and significant (see column (1) in Table 10) which could be consistent with the hypothesis regarding a direct link which espouses that higher timber prices implies less aid. To test the validity of our instrument, we focus on the effect of timber prices on aid *directly* in areas with little or no conflict — i.e., we test for a reduced form relationship between the two variables (timber values and aid) in a context free of conflict. The idea is that if the reduced form relationship is *not* statistically significant, our doubts regarding the validity of the exclusion restriction would be assuaged.[39]

[39]We are grateful to an anonymous referee for this suggestion.

	Overall *1st stage* [1]	**Overall** *DDA* [2]	**Overall** *Aid Alloc.* [3]	**Overall** *Projects* [4]	**State** *Projects* [5]	**Maoists** *Projects* [6]
Conflict deaths per 1000 population		11.479**	27.831*	1.733***		
		(5.292)	(14.692)	(0.594)		
Deaths caused by state per 1000 population					2.362***	
					(0.832)	
Deaths caused by Maoists per 1000 population						6.508***
						(2.300)
(log) Value of wood	-1.946***					
	(0.546)					
Av. Per-capita expenditure	0.000*	-0.003***	0.001	-0.000	-0.000	-0.000
	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
Poverty (Headcount)	0.593	-21.663**	47.207	-1.872	-2.022	-1.457
	(0.519)	(10.744)	(29.272)	(1.562)	(1.635)	(1.561)
Ethnic group sizes	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y
Number of observations	136	136	136	136	136	136
F-statistic (Kleibergen-Paap rk Wald)	12.691				11.289	12.542

Table 10: 2 SLS-IV LINEAR REGRESSIONS. Sources and Notes: The variable *(log) Value of wood* is constructed as a weighted timber price index at the district level (see main text for detailed description) and is used an instrument for conflict. Column 1 reports the first-stage regression results. Columns 2–4 report the second-stage results for the three different outcome : the Nepal government's budgetary development allocation (DDA), the foreign aid allocation and the average number of foreign aid-funded projects. Columns 5 and 6 report the results for conflict deaths by the State and by the Maoists, respectively, for the average number of foreign aid-funded projects as the outcome variable. Robust standard errors clustered by district are given in parentheses.

We carry out precisely this exercise and the results are reported in Table 11. Here, we only focus on districts where the conflict measure is below 0.5; the mean of this variable in our sample is 0.951 (see Table 1).[40] As one can see in Table 11, in none of the specifications is the coefficient on our instrument *(log) Value of wood* even close to being statistically significant at the 10% level. This stands in sharp contrast with the significant 2SLS-IV results in Table 10. Hence, this exercise helps mitigate our concerns as regards the exclusion restriction of our instrument *(log) Value of wood*, and bolsters our faith in the 2SLS-IV analysis.

	DDA [1]	*DDA* [2]	*Aid Alloc.* [3]	*Projects* [4]
(log) Value of wood	5.272	-10.241	-7.121	-3.442
	(31.123)	(31.472)	(7.457)	(3.941)
Av. Per-capita expenditure		-0.004**	0.000	-0.000**
		(0.002)	(0.000)	(0.000)
Headcount of poverty		-12.138	12.334	3.375
		(24.885)	(7.619)	(3.012)
Ethnic group sizes	N	Y	Y	Y
Population	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y
Number of observations	50	50	50	50
Adjusted R^2	0.281	0.596	0.637	0.970

Table 11: Aid allocation and the Value of Timber: OLS Fixed Effects regressions. Sources and Notes: The sample is restricted to districts which experienced little or no conflict. Columns [1] and [2] have DDA per capita as the dependent variable. Columns [3] and [4] have per capita foreign aid allocation and the number of projects, respectively, as the dependent variable. Robust standard errors clustered by district are given in parentheses.

4 Conclusion

In this paper, we examine the role conflict plays in determining the distribution of economic resources after conflict has ended. Most studies on conflict have highlighted factors which precipitate conflict but the literature on the economic consequences of conflict is relatively sparse. Our study of the Maoist uprising and its aftermath in Nepal aims to close this gap.

[40] This reduces our sample to 50 as opposed to the usual 140.

Our theory combines political factors with economic ones to capture some salient aspects of the Maoist uprising. In particular, we derive that it is poorer groups who are the bigger contributors to the Maoist cause; this is true even absent of any ideological ties between low-income groups and the Maoists. And more importantly, our model also delivers that it is these poor "rebellious" groups who stand to gain more — not in an absolute sense — but in a relative one, in the event of a successful Maoist revolution. So conflict may not bring about an entire "reversal of fortunes" but will serve to help these groups in reducing poverty.

We also examine these predictions empirically. First, we replicate the findings from Do and Iyer (2010) who have documented that poorer districts experienced higher levels of conflict. Next, we use data on consumption expenditure that is available from the nationally representative Nepal Living Standards Survey (NLSS) over several years: particularly, from years before and after the decade long Maoist war. This is combined with various data on different kind of district level allocations (for public infrastructure development and the like). Specifically, we exploit the data on the Foreign aided projects which is available from Nepal's Aid Management Platform. Using these data and performing both panel level and cross-sectional analysis, we consistently find that districts which experienced higher levels of conflict (during the decade-long Maoist war) were more likely to have a greater number of foreign aided projects in years after the war even when controlling for the poverty rate at the district level.

So is this really a "reward" for supporting the eventual victors? Or perhaps the victors would have targeted the poorer districts in any case, in the spirit of the benevolent social planner? Our empirical results suggest that the "reward" mechanism seems more plausible than the "benevolent social planner" story: conflict intensity has an independent effect on the number of foreign aid funded projects even aside from the effect poverty has. Also, the patterns in district-level inequality hint at the opportunistic motives of the Maoists.

From a normative point of view, should one despair? While our work does not directly deal with welfare analysis, we believe that the answer is in the negative. First, it is hard to argue that greater reductions in poverty for the poorer parts of the country is *reducing* social welfare whatever may be the means to secure this. But that said, whether such redistribution is happening at the expense of overall growth or not is an open question. Secondly, to the extent that the ushering in of multi-party democracy is beneficial for the expression of certain political, social and economic freedoms, such "conflict" may not be outright detrimental. Hence, compensation for the conflict-contributors may well be justified. Of course, the question as to whether clientelistic relations will be further re-inforced between the Maoists and their supporters from these "core" groups remains unanswered. These questions, among others, remain open to further probing.

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Appendix

Proofs: Baseline model

Proof of Observation 1: Note that $x_i = 0$ for every $i \in \{1, .., N\}$ is not possible in equilibrium as M can gain by offering a infinitesimal amount to any group. So we can restrict attention to $x_i = x > 0$. Suppose there exists such x that this is part of an equilibrium. This implies that the FOC w.r.t r_i for every i becomes (see equation (1)):

$$x\frac{R_K}{(R_K + R_M)^2} = \frac{y_i^{(1-\sigma)}}{(1 - r_i)^\sigma} \tag{5}$$

The above equation defines r_i as an implicit function of x. Differentiating both sides of the above equation w.r.t. x yields:

$$\frac{R_K}{(R_K + R_M)^2} - 2x\frac{\partial r_i}{\partial x}\frac{R_K}{(R_K + R_M)^3} = \sigma\frac{\partial r_i}{\partial x}\frac{y_i^{(1-\sigma)}}{(1 - r_i)^{\sigma+1}}$$

Using the relation in equation (5) and re-arranging terms, we get:

$$\frac{\partial r_i}{\partial x}\left[\frac{2}{R_K + R_M} + \frac{\sigma}{1 - r_i}\right] = \frac{1}{x}$$

This implies if $r_i > r_j$ then it must be that $\frac{\partial r_i}{\partial x} < \frac{\partial r_j}{\partial x}$.

But this violates the equilibrium condition (consult equation (2)) that $\frac{\partial r_i}{\partial x}$ must be equalized across all i since $x_i = x > 0$. Therefore, it must be that r_i is also equalized across all i.

However, take any y_i, y_j such that $y_i \neq y_j$. Then by equation (5), $r_i \neq r_j$. This leads to a contradiction and hence establishes the observation. ■

Proof of Observation 2: Start with the FOC w.r.t r_i which is given by equation (1). Differentiating both sides of the above equation w.r.t. x_i and re-arranging terms yields:

$$\frac{\partial r_i}{\partial x_i}\left[\frac{2}{R_K + R_M} + \frac{\sigma}{1 - r_i}\right] = \frac{1}{x_i} \tag{6}$$

Take groups i and j such that $y_i < y_j$. Suppose $x_i \geq x_j$. In equilibrium, $\frac{\partial r_i}{\partial x_i} = \frac{\partial r_j}{\partial x_j}$ since $x_i, x_j > 0$. This implies

$$\frac{2}{R_K + R_M} + \frac{\sigma}{1 - r_i} \leq \frac{2}{R_K + R_M} + \frac{\sigma}{1 - r_j}$$

which leads to $r_i \leq r_j$. Recall, the FOC w.r.t r_n for $n = i, j$ (see equation (1)). These jointly

imply

$$\frac{y_i^{(1-\sigma)}}{(1-r_i)^{\sigma}} \geq \frac{y_j^{(1-\sigma)}}{(1-r_j)^{\sigma}}$$

by $x_i \geq x_j$. Since $y_i < y_j$, it must be that $r_i > r_j$ for the above relation to hold. But this leads to a contradiction. Therefore, it must be that $x_i < x_j$ in equilibrium. ■

Proof of Proposition 1: By Observation 2, we have $x_i < x_j$ whenever $y_i < y_j$. Using this relation in equation (6) for i and j respectively and invoking $\frac{\partial r_i}{\partial x_i} = \frac{\partial r_j}{\partial x_j}$ yields $r_i > r_j$ thus completing the proof. ■

Proof of Proposition 2: For any group i such that $x_i > 0$, we have

$$x_i = \frac{R_K + R_M}{1-p} . \frac{y_i^{(1-\sigma)}}{(1-r_i)^{\sigma}}$$

by equation (1). Therefore, for any two groups i and j with $x_i, x_j > 0$ the following applies:

$$\frac{x_i}{x_j} = \left(\frac{y_i}{y_j}\right)^{1-\sigma} . \left(\frac{1-r_j}{1-r_i}\right)^{\sigma} > \left(\frac{y_i}{y_j}\right)^{1-\sigma}$$

since we have $r_j < r_i$ from Proposition 1. Hence,

$$\frac{x_i}{x_j} > \left(\frac{y_i}{y_j}\right)^{1-\sigma} > \frac{y_i}{y_j}$$

where the last inequality follows from $y_i < y_j$ and $\sigma \in (0,1)$.

Re-arranging terms yield $\frac{x_i}{y_i} > \frac{x_j}{y_j}$ thus establishing the proposition. ■

Proof of Proposition 3: Take groups i, j such that $y_i < y_j$. Since $y_i + x_i^p = y_j + x_j^p$, we have $x_i^p > x_j^p$. Using this relation in equation (1) for i and j respectively, we get:

$$\frac{x_j^p}{x_i^p} = \left(\frac{y_j}{y_i}\right)^{1-\sigma} . \left(\frac{1-r_i}{1-r_j}\right)^{\sigma}.$$

Note, the LHS of the above equation is smaller than 1 while the first term on the RHS exceeds 1. This implies $(\frac{1-r_j}{1-r_i})^{\sigma}$ must be smaller than 1. This yields $r_i > r_j$ thus completing the proof. ■

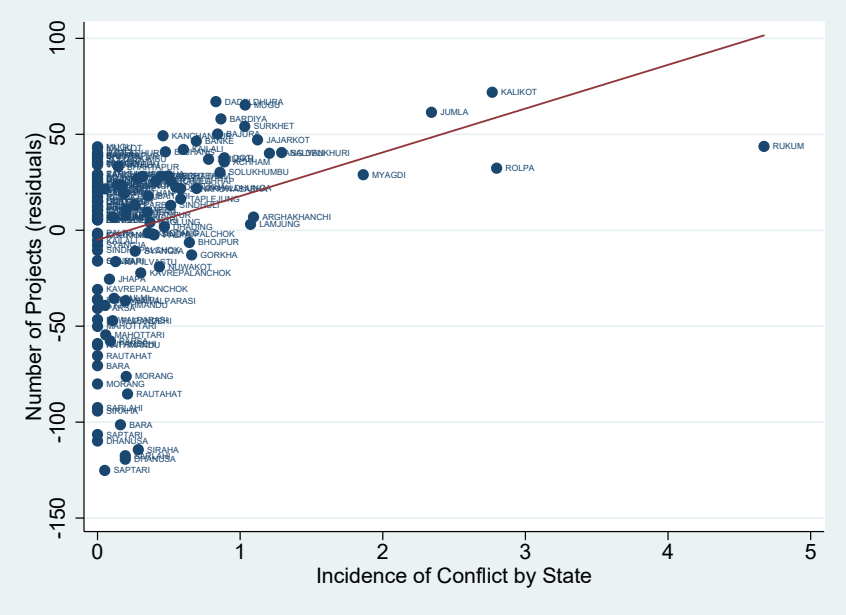

Figure 2: Number of Foreign Aid-funded Projects and Conflict (deaths by State). The vertical axis plots the residual of number of Foreign Aid-funded Projects in the period following conflict after district–, time– and population effects have been removed. The horizontal axis plots the total casualties caused by the State in the district. So each district appears twice in the figure (once for every period).

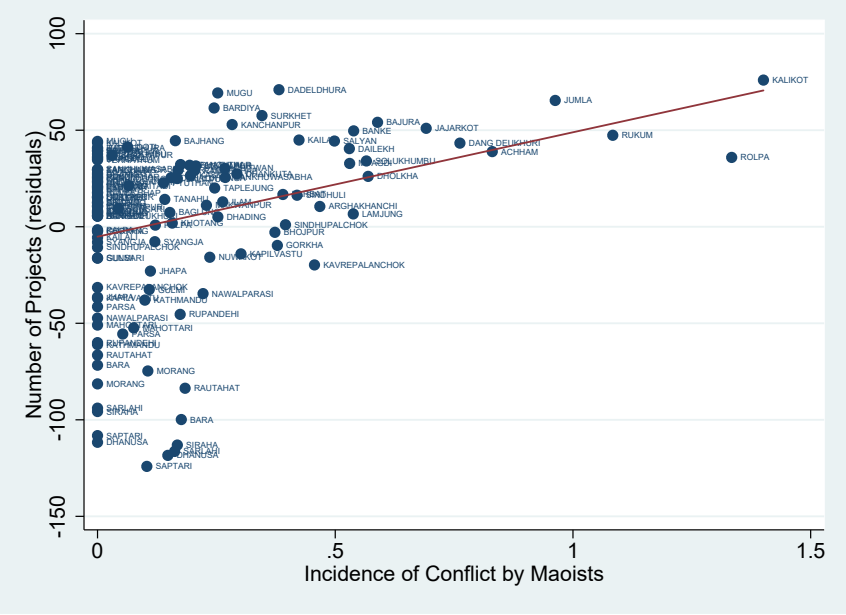

Figure 3: Number of Foreign Aid-funded Projects and Conflict (deaths by Maoists). The vertical axis plots the residual of number of Foreign Aid-funded Projects in the period following conflict after district–, time– and population effects have been removed. The horizontal axis plots the total casualties caused by the Maoists in the district. So each district appears twice in the figure (once for every period).

	DDA		Aid Allocation		Aid: No. of Projects	
	[1]	[2]	[3]	[4]	[5]	[6]
Conflict deaths per 1000 population	0.287	1.290	19.974	20.844	0.836***	0.847***
	(1.116)	(1.172)	(17.712)	(16.758)	(0.232)	(0.186)
Av. Per-capita expenditure		-0.001*		0.001		0.000
		(0.001)		(0.001)		(0.000)
Night-time lights		11.998**		3.360		0.907
		(5.144)		(5.633)		(0.728)
Ethnic group sizes	N	Y	N	Y	N	Y
Population	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140
Adjusted R^2	0.305	0.599	0.224	0.318	0.941	0.953

Table 12: OLS Fixed Effects regressions with Night-time lights. Sources and Notes: Columns [1] and [2] have DDA per capita as the dependent variable. Columns [3] and [4] have per capita foreign aid allocation and columns [5] and [6] have the number of projects as the dependent variable. Robust standard errors clustered by district are given in parentheses.

	Poverty			Inequality			
	[1] *Headcount*	[2] *Poverty Gap*	[3] *Sq. Gap*	[4] *Gini*	[5] *Atkinson*	[6] *Foster-Wolfson*	[7] *NTL*
Conflict deaths per 1000 population	0.003	-0.011	-0.011	0.001	-0.000	-0.010	-0.043
	(0.016)	(0.014)	(0.010)	(0.011)	(0.007)	(0.015)	(0.041)
Ethnic group sizes	Y	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140	140
Adjusted R^2	0.819	0.772	0.677	0.024	0.035	0.299	0.664

Table 13: Poverty and Inequality (without Av. Per-capita Expenditure): OLS Fixed Effects regressions. Sources and Notes: Columns [1] — [3] have different measures of (district-level) poverty as the dependent variable, specifically, the Headcount Ratio, the Poverty Gap and the Poverty Squared Gap. Columns [4] — [6] have different measures of (district-level) inequality as the dependent variable, specifically, the Gini, the Atkinson Index and the Foster-Wolfson index of polarisation Column [7] has the average night-time lights as the dependent variable. Robust standard errors clustered by district are given in parentheses.

	Pov. Gap	Pov. Sq. gap	Gini	Atkinson(1)	Atkinson(2)	GE_0	GE_1	GE_2	ER_1	ER_2	ER_3	FW
Conflict deaths per 1000 population	0.854***	0.832***	0.845***	0.843***	0.854***	0.839***	0.832***	0.819***	0.817***	0.818***	0.820***	0.931***
	(0.184)	(0.177)	(0.179)	(0.187)	(0.188)	(0.188)	(0.184)	(0.182)	(0.196)	(0.195)	(0.194)	(0.170)
Measure of Dispersion	-4.639	-6.499	3.590	2.752	1.946	1.684	2.312	1.551	-9.769	-18.807	-33.618	7.486***
	(2.824)	(4.066)	(3.801)	(4.724)	(2.892)	(3.944)	(3.706)	(1.986)	(12.598)	(19.449)	(28.950)	(2.379)
Av. Per-capita expenditure	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ethnic group sizes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140	140	140	140	140	140	140
Adjusted R^2	0.953	0.953	0.952	0.952	0.952	0.952	0.952	0.952	0.952	0.952	0.952	0.957

Table 14: Alternative definitions of dispersion (Panel Regressions): Sources and Notes: Each column here has a different measure of dispersion as a control variable as indicated by the column heading. In all regressions the dependent variable is the same: the total number of foreign aided projects. Robust standard errors clustered by district are given in parentheses and all regressions have time dummies and population proportion added as controls.

	Pov. Gap	Pov. Sq. gap	Gini	Atkinson(1)	Atkinson(2)	GE_0	GE_1	GE_2	ER_1	ER_2	ER_3	FW
Conflict deaths per 1000 population	0.563**	0.567**	0.630**	0.629***	0.605**	0.633***	0.654***	0.664***	0.573**	0.571**	0.575**	0.568**
	(0.226)	(0.222)	(0.238)	(0.235)	(0.239)	(0.235)	(0.229)	(0.226)	(0.220)	(0.222)	(0.226)	(0.217)
Measure of Dispersion 1995-96	-1.770	-1.853	4.948	5.719	3.569	4.936	4.168	2.313	-2.120	5.126	19.619	-1.049
	(2.878)	(3.841)	(3.886)	(4.473)	(2.739)	(3.729)	(3.640)	(2.377)	(13.282)	(19.867)	(29.322)	(2.752)
Linguistic polarization 1995-96	0.956	1.048	1.173	1.227	1.270	1.239	1.166	1.115	1.278	1.287	1.284	1.316
	(1.532)	(1.493)	(1.416)	(1.412)	(1.412)	(1.411)	(1.418)	(1.434)	(1.419)	(1.412)	(1.407)	(1.440)
Caste polarization 1995-96	0.263	0.270	-0.585	-0.633	-0.398	-0.656	-0.900	-1.054	0.218	0.242	0.264	0.141
	(4.496)	(4.540)	(4.469)	(4.493)	(4.452)	(4.502)	(4.585)	(4.731)	(4.545)	(4.539)	(4.525)	(4.554)
Infant mortality 1995-96	0.025*	0.024	0.027*	0.027	0.027	0.027	0.026	0.026	0.024	0.023	0.022	0.024
	(0.015)	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
Elevation (maximum)	-0.538***	-0.540***	-0.558***	-0.559***	-0.556***	-0.561***	-0.558***	-0.553***	-0.541***	-0.545***	-0.548***	-0.535***
	(0.134)	(0.133)	(0.127)	(0.127)	(0.128)	(0.126)	(0.125)	(0.124)	(0.136)	(0.136)	(0.135)	(0.133)
Aid projects 1995-96	0.313*	0.314*	0.298	0.299	0.295	0.298	0.308*	0.318*	0.307*	0.307*	0.307*	0.310*
	(0.177)	(0.180)	(0.179)	(0.179)	(0.178)	(0.179)	(0.179)	(0.179)	(0.178)	(0.177)	(0.176)	(0.179)
Population	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Number of observations	70	70	70	70	70	70	70	70	70	70	70	70
Adjusted R^2	0.275	0.272	0.285	0.284	0.283	0.285	0.284	0.284	0.270	0.270	0.272	0.271

Table 15: Alternative definitions of dispersion (Cross-sectional regressions): Sources and Notes: Each column here has a different measure of dispersion as a control variable as indicated by the column heading. In all regressions the dependent variable is the same: the change in number of foreign aided projects. Robust standard errors are given in parentheses.

	Agriculture	**Communication**	**Development**	**Education**	**Health**	**Infrastructure**	**Institution**
Conflict (GDELT)	0.000***	-0.000	0.000***	0.000	0.000***	0.000*	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Av. Per-capita expenditure	0.000***	-0.000	0.000**	0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Headcount of poverty	0.617	-0.058	-0.247	0.088	-0.415	0.060	-0.310
	(0.489)	(0.051)	(0.549)	(0.311)	(0.485)	(0.285)	(0.189)
Ethnic group sizes	Y	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y	Y
Number of observations	140	140	140	140	140	140	140
Adjusted R^2	0.880	0.383	0.912	0.873	0.926	0.896	0.950

Table 16: Sector Specific aid allocation. Sources and Notes: The conflict measure is computed using the GDELT dataset. We have divided the total number of projects into seven broad categories: agriculture, communication, infrastructure, education, health, institutional and general development. Each column has the dependent variables as the specific sectoral project numbers. Robust standard errors clustered by district are given in parentheses.

	DDA		Aid Allocation		Aid: No. of Projects	
	[1]	[2]	[3]	[4]	[5]	[6]
Conflict (GDELT)	0.006***	0.006***	0.008*	0.008*	0.001***	0.001***
	(0.001)	(0.001)	(0.004)	(0.004)	(0.000)	(0.000)
Left seatshare	-0.226**		-1.455		-0.010	
	(0.100)		(1.112)		(0.032)	
Ultra-Left seatshare		-0.122		0.285		-0.032
		(0.236)		(0.752)		(0.070)
Av. per-capita expenditure	-0.000	-0.000	0.008*	0.006*	0.000*	0.000*
	(0.000)	(0.000)	(0.005)	(0.004)	(0.000)	(0.000)
Headcount of poverty	-8.448	-8.720	80.820	74.997	0.093	0.181
	(6.508)	(6.459)	(52.185)	(49.883)	(1.694)	(1.716)
Ethnic group sizes	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Number of observations	138	138	138	138	138	138
Adjusted R^2	0.832	0.815	0.288	0.236	0.952	0.952

Table 17: OLS Fixed Effects regressions: Left electoral presence. Sources and Notes: Conflict is measured using the GDELT dataset. Columns [1] and [2] have DDA per capita as the dependent variable. Columns [3] and [4] have per capita foreign aid allocation and columns [5] and [6] have the number of projects as the dependent variable. We categorise the left parties into two groups on the basis of their stated ideologies — *Left* and *Ultra-left*. Next, we look at their share of seats they won in a district. We utilise the 1994 and the 2008 elections for these measures. Robust standard errors clustered by district are given in parentheses.

	State *1st stage* [1]	**State** *DDA* [2]	**State** *Aid Alloc.* [3]	**Maoists** *1st stage* [4]	**Maoists** *DDA* [5]	**Maoists** *Aid Alloc.* [6]
Deaths caused by state per 1000 population		15.645**	37.932*			
		(7.421)	(21.066)			
Deaths caused by Maoists per 1000 population					43.105**	104.508**
					(19.465)	(49.278)
(log) Value of wood	-1.428***			-0.518***		
	(0.425)			(0.146)		
Av. Per-capita expenditure	0.000*	-0.003***	0.001	0.000*	-0.004***	0.001
	(0.000)	(0.001)	(0.002)	(0.000)	(0.001)	(0.001)
Poverty (Headcount)	0.498	-22.659**	44.793	0.094	-18.919	53.859*
	(0.356)	(10.708)	(29.756)	(0.196)	(12.038)	(30.184)
Ethnic group sizes	Y	Y	Y	Y	Y	Y
Time dummy	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y
Number of observations	136	136	136	136	136	136
$F-$statistic (Kleibergen-Paap rk Wald)	11.289			12.542		

Table 18: 2 SLS-IV LINEAR REGRESSIONS. Sources and Notes: The variable *(log) Value of wood* is constructed as a weighted timber price index at the district level (see main text for detailed description) and is used an instrument for conflict. Column 1 reports the first-stage regression result for conflict deaths by the State. Columns 2 and 3 report the second-stage results for different outcomes: the Nepal government's budgetary development allocation (DDA) and the foreign aid allocation. Column 4 reports the first-stage regression result for conflict deaths by the Maoists. Columns 5 and 6 report the corresponding second-stage results for different outcomes: the Nepal government's budgetary development allocation (DDA) and the foreign aid allocation. Robust standard errors clustered by district are given in parentheses.