Households in Times of War:

Adaptation strategies during the Nepal Civil War*†

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Abstract

This paper analyses short and medium term consequences of the Nepalese civil war on rural households livelihoods and on the inter-group distribution of income. Conclusions rely on two very rich datasets: the Nepal Living Standards Survey collected before, during and after the war and data on the number of killings by month and village during the eleven years of the conflict. Using the survey timing as a quasi-natural experiment, results indicate that in the short-run all households lose, but high castes by a larger extent. Short-term coping strategies determine medium term diverging recovery paths. Non-high castes allocate more labour in agriculture and loose more in the medium term. High castes diversify their income sources, notably by relying on migration, which allows them to recover.

Keywords:
Civil war ; Income distribution ; Labour ; Inequality ; Migration ; Nepal

JEL codes:
O1, D1, D74, Q12, N45

> There is no example of a nation that would have benefited from a long war.
>
> Sun Tzu, VI century BC, *The Art of War*

> The sharp reduction in income inequality that we observe in almost all the rich countries between 1914 and 1945 was due above all to the world wars and the violent economic and political shocks they entailed (especially for people with large fortunes). It had little to do with the tranquil process of intersectoral mobility described by Kuznets.
>
> Thomas Piketty, 2013, *Capital in the Twenty-First Century*

1 Introduction

One of the declared goals of Maoists in Nepal was to *"free the Nepalese society from feudalism and imperialism through the bourgeois democratic revolution"*[1]. Few years after peace agreements in 2006, can we see premises indicating that eleven years of war contributed to challenge historical inequalities? This study analyses the short and medium term effects of war on rural households livelihoods and disaggregates the consequences of the conflict between high castes and others.

This paper takes advantage of two very rich datasets to develop an original identification strategy of households' responses in times of war. Household level data were collected by the Central Bureau of Statistics of Nepal, in collaboration with the World Bank, before, during and after the war. The dataset has both repeated cross-sections and a rotating panel at the household level. The conflict dataset, collected by the Informal Sector Service Center (INSEC) of Nepal, gathered information on the number of casualties for each month and each of the 3,972 village development committees in Nepal during the eleven years of the civil war.

To identify short-term effects of the conflict, I use the second wave of data collection, which occurred during the conflict, as a quasi-natural experiment. Showing that the timing of the survey is orthogonal to the conflict, I compare villages within the same neighbourhood randomly surveyed at different points in time. The overall exposure to violence in a given area is not random. But, conditionally on the local exposure, whether an additional casualty occurred just before or just after the survey is random by the fact that the order in which villages were surveyed is orthogonal to the conflict. In other words, the number of casualties before the survey, controlling for the total number of casualties around the survey, becomes a quasi-random variable and allows the estimation of causal effects.

[1] Prachanda, Chairman of the Communist Party of Nepal - Maoist, A brief introduction to the policies of the CPN(Maoists). Source: *Maoist Information Bulletin*, No 8, 20 January, 2004

I find that, in the short-term, violence reduces income and consumption for all rural households and especially more for high caste households. The analysis directly relates the reduction of income to a reduction of labour time in non-agricultural occupations. Non-high caste households mitigate the income loss by increasing their agricultural labour. For high castes, migration appears as a dominant strategy. A back of the envelope calculation allows estimating that the short-term effect of violence in 2003 has pushed 200,000 productive males of the high castes out of their households, which represents 4% of the high caste rural population.

The short-term adaptation pattern of households has lasting effects and has steered the recovery of high castes and others on different tracks. In the medium term, non-high caste households in conflict zones allocate relatively more labour to self-employed agricultural occupations, while high castes do not. Despite this divergence in terms of work time, both types of households experience a reduction of this income source. High castes mitigate this loss by a diversification of income sources and by the relative reduction of household size, two channels in which migration plays a key role. Consequently, even if high caste households, who were specific targets of the Maoists, were losing more income in the short-term, they recovered in a seven years period including four years of peace are found to keep holding the upper hand.

I estimate the medium term effects on the last two waves of the panel. It allows focusing on the recovery path of households through the last years of the conflict and the first three to four years of peace as a function of conflict intensity between the two survey waves. The use of the household level panel already removes all time unvarying characteristics of households and villages which could be correlated with war and affect outcomes. Yet, conflict intensity might still be correlated with the change in income for instance. I therefore develop a two-step approach where I use the interaction between the price of wood and the distance to India as an exogenous predictor of the number of killings in surveyed villages. This predictor is strong from a statistical angle. It is relevant from an historical perspective because Maoists had financial needs, and timber smuggling to India was an important source of income. I also show that the exclusion restriction holds, given the large set of controls used and a series of exogeneity tests estimated using the pre-war wave of data collection.

This paper contributes to the literature in several dimensions. First, data are of high quality and were collected before, during and after the war at the household level. Considering the additional presence of a rotating panel, this is, in itself a rare strength. Second, the paper analyses household decisions in times of war and is immediately able to relate these choices to households' trajectories in post-war conditions. Third, the short-term methodology is creative. It actually builds on

the work of Guidolin and La Ferrara (2007) and Lind et al. (2014) who rely on the timing of violent events to identify the effect of war. The short-term methodology of this paper uses the survey as a quasi-natural experiment to identify effects of temporal variations of conflict intensity on household behaviour.

The current economic literature on the consequences of conflict is relatively scarce, by lack of data, and can grossly be divided in two parts, none of them directly addressing effects at the household level nor explicitly analysing inequalities between groups. Studies discussing effects on income mostly focus on mezzo or macro-economic outcomes and a significant share of the literature is based on cross-country studies (see Blattman and Miguel (2010) for a review and discussion) or on variations within countries and between sub-regions, like in Miguel and Roland (2011) analysis of post-war Vietnam or in Abadie and Gardeazabal (2003)'s analysis of the Basque country. There is an emerging and growing literature on micro-level consequences of conflict focusing on human capital accumulation through schooling[2], health[3] or social cohesion[4] and outcomes on the labour market[5]. Most of these papers identify a causal relationship using difference-in-differences between cohorts. This technique is however hard to apply at the household level and researchers who analyse production or consumption decisions often rely on extensive sets of controls[6] or exclusion restrictions[7].

As any study on a specific country, this paper does not address changes at the nationwide level since it would affect all households in the same way. The scope of the paper is not to address all consequences of the conflict on household lives. Yet, this research highlights that the redistributive effects of violence were anything but durable. The short-term adaptation strategies are key to understand what the postwar process has meant for rural households, what are some of the economic challenges they are confronted by. Last, the losers and winners of one day may actually change status once the war is over.

The paper is organized as follows. The next section presents the Nepali context. The third section describes data. Short-term effects of the conflict come in the fourth section and are followed by medium term effects in the fifth section, just before the conclusion.

[2]Chamarbagwala and Moran (2011); Shemyakina (2011)
[3]Bundervoet et al. (2009); Minoiu and Shemyakina (2012); Valente (2015)
[4]Bellows and Miguel (2009); La Mattina (2014)
[5]Galdo (2013)
[6]Kondylis (2010); Verpoorten (2009)
[7]Miguel and Roland (2011)

2 Conflict in Nepal

In 1996, the "People's War" broke out in the Kingdom of Nepal, a landlocked country between India and China. The Communist Party of Nepal - Maoists (CPN-M) launched attacks against an agricultural bank and police posts in four of the 75 administrative districts of the country (Thapa, 2004, p.48). The conflict lasted for eleven years. At the signing of the peace agreement in June 2006, the death toll exceeded 13,000 casualties (INSEC, ears).

From a small scale and localized rebellion to a country wide war, the evolution of the conflict can very much be related to Maoists' military strategy[8]. At the beginning it was a small guerilla like organization. It benefited from the remoteness, the under-development and the lack of attention - if not the power *vaccum* - in a few isolated rural districts (Onesto, 2005, p.9-11). Following Mao's principles, Maoists first waged a mobile warfare, harassing police forces and building support in the countryside, mostly around their strongholds (Thapa, 2004, p.99).

The year 2001 is an important milestone in the civil war. The government created the Armed Police Force in January. In June, the King was murdered by his son. Two months later, a short cease-fire followed. In November, the Maoists broke it by launching a raid against the Royal Nepali Army (RNA), which got officially involved in the war thereafter. 2001 is the first year of the "strategic balance" phase of the Maoists' plan. This year witnesses a clear extension and intensification of the conflict. The vast majority of killings occurred after this date.

In 2004, Maoists declared to control over 80% of rural Nepal (Onesto, 2005, p.227). They had established "People's Governments" in many localities. This year also corresponds to the "strategic offensive", the third phase of Maoists strategy. The People's Liberation Army (PLA) selectively targeted the RNA. At the nationwide level, the PLA was outnumbered by government forces (Onesto, 2005, p.220) and it had never been able to control any cities nor district headquarters. Conversely, the central government authority over the rural areas was very weak.

Waging a war requires resources. The CPN-M got little support from foreign countries (Ujpreti, 2010). 85% of arms and ammunition were looted during raids against police forces and, in a second stage, army bases (Mehta and Lawoti, 2010). Villagers had to offer food and shelter for Maoists fighters walking from one place to another. Sometimes villagers had also to provide free labour (Lecomte-Tilouine, 2013, p.234). On top of direct contributions in nature, the CPN-M levied taxes or resorted to extortions especially against villagers earning monetary income through labour, pensions or remittances (Lawoti, 2010, p.23). Cailmail (2013, p.157) quotes

[8]See Cowan (2013) and Mehta and Lawoti (2010) for a deeper discussion of Maoists' military strategy.

a former Gorkha soldier in the Indian Army stating:

> Life is hard, for the Maoists regularly come here asking for food and money. (...) If I do not abide by their rules, they threaten me. Five months ago, they kidnapped my son to force me to give them money. They still come every month, when I get my pension, and ask me for money, food and lodgings.... The Maoists see only my income and not all the expenses I have.

While this example is extreme, contributions were generalized (Ghimire, 2013; Lama Tamang et al., 2006; Lecomte-Tilouine, 2013). Another source of income was the partial to full control of forest products trade. Lekhraj Bhatta, Head of Seti-Mahakali People's Government, explains that *"the resources for running our government come from taxes on the natural resources available in our region (such as herbs and timber), trade duties and voluntary contributions from various professionals and the ordinary working population"* (ICG, 2005).

Means have ends. The CPN-M increased their control of the countryside to put pressure on cities and change the development path of Nepal (Onesto, 2005, p.13). In the 40 demands presented just before the onset of the conflict, 17 items deal with democratic reforms asking for more equality and 14 with livelihoods improvements (Bhattarai, 1996). The location of casualties reflects this last point. Poverty (Do and Iyer, 2010; Hatlebakk, 2010), inequalities and ethnic fractionalisation (Nepal et al., 2011) and land concentration (Hatlebakk, 2010) were fertile grounds for fighting and recruitment (Macours, 2011).

Ethnicity is neither the official motto of the conflict nor its sole driver[9]. However, there is a strong correlation between long standing economic and political exclusion and the membership to some ethnic groups of the Hills and Mountains - like Magars and Gurungs - or other clearly identified population subgroups such as Dalits.

The Maoists were keen on targeting high caste members and especially Bahuns and Chhetris. Nevertheless, the civil war had deep consequences on all villagers' livelihoods. The effect on schooling attainment is debated among economists (Pivovarova and Swee, 2015; Valente, 2014). Regarding gender consequences, Valente (2011, 2015) finds that the sex ratio at birth is distorted against men and that women marry earlier. Women would also work more (Menon and Rodgers, 2013).

The anthropological literature reports much broader consequences on the life of villagers. Migration, especially of young males was massive. Every young men was a potential warrior for the Maoists and was therefore a potential recruit. Ghimire

[9]For a longer perspective on the political economy of the Nepalese conflict, see inter alia Sharma (2006).

(2013, p125) observes *"voluntary exile in practically every family"*. Mobility of staying villagers was severely restricted. Access to cities was difficult and trade activities were disrupted (Lama Tamang et al., 2006). Even activities around the village, like forest products collection, were getting harder. Maoists repressed formal and informal lenders, "feudals" and "exploiters" (Shrestha-Schipper, 2013, p.272). On the other side, Maoists claimed to provide public goods, increase teacher assiduity, empower women and dalits, reduce alcohol consumption, ... (Lawoti, 2010; Lecomte-Tilouine, 2013, p.252). Ghimire (2013, p.128) reports that Maoists fighters spent also time to help villagers in their everyday life with the aim of building support for the rebellion.

The mode of action and the strategy of the Maoists has therefore deep consequences on the distribution of power and income, especially in rural areas where the conflict was concentrated. The goal of Maoists was not to crush the rural economy since rural support was important for them both for political and economic reasons (ICG, 2005). Hence, this paper focuses both on the average effect of violence and on the differential consequences of violence on particular population subgroups.

3 Data

Compared to the usual scarcity of microlevel data in times of war, Nepal stands up as a fertile ground for quantitative work on the consequences of conflict. On the one hand, the civil war in Nepal is well documented. On the other, household level data were collected even during hostilities. In this section, I first describe data on conflict intensity, then household level data and discuss how both sets overlap. The final subsection quickly introduces secondary sources of information used as controls.

3.1 Conflict data

The Informal Sector Service Centre (INSEC), a very active Nepali human rights organization, collected extensive data on conflict intensity and human rights violations during the whole duration of the conflict. The INSEC database (INSEC, 2009) is considered the most reliable data source on conflict intensity during the Maoist insurgency. This database is used in many papers dealing with the conflict including Nepal et al. (2011) and Valente (2014). INSEC had a broad grassroots network of local contacts in the 3972 Village Development Committees (VDCs) and municipalities of Nepal. For each and every VDCs, INSEC reports the number of conflict related casualties by warring parties and by months during the eleven years of the conflict. Of the 13,236 casualties reported by INSEC, I use 12,957 of

them which are time and geo-localized. The remaining 2% do not have a precise location or month and are therefore omitted in the analysis.

[Insert figure 1 here]

Casualties are widely spread over the entire country. By the end of 2006, 40.7% of Nepali VDCs experienced at least one conflict related killing within their perimeter. Figure 1 shows the geographical extent of the conflict at the end of the war. The darker a VDC on the map, the larger the number of killings during the conflict[10]. All regions of Nepal were directly affected by the conflict, however at varying degree[11] and varying timing. Over the eleven years of the conflict, there is a clear intensification in the 2000's. As shown in figure 2, hostilities till 2001 were mainly concentrated around the Rolpa and Rukum district in the West, and at the East of Kathmandu. The creation of the Armed Police Force, the attack of army barracks by the Maoists and the subsequent implication of the Royal Nepal Army corresponds to a clear escalation of the conflict, both in terms of intensity and extension.

[Insert figure 2 here]

3.2 Household data

The Central Bureau of Statistics of Nepal (CBS) in collaboration with the World Bank gathered the Nepal Living Standards Surveys (NLSS). It is a nationally representative survey conducted in 1995/96, 2003/04 and 2010/11[12]. The surveys follow the World Bank's Living Standards Measurement Survey (LSMS) methodology and compile household and village level data. I use household level data in rural areas which cover a wide range of topics: demography, production decisions, consumption choices, income level and sources, health, education, etc.

The structure of the dataset is rich, with both repeated cross-sections and a rotating panel. Households in the cross-sections were always selected in a two-stage sampling process, with a sampling of wards[13] followed by a sampling of households within the ward. Since we focus on the effect of the conflict in rural areas, we are left with a sample of 2,657, 2,748 and 3,900 rural households living in 215, 229 and 325 wards respectively in 1995, 2003 and 2010. In 2003, the CBS tracked

[10]Transparent areas within Nepal correspond to national parks

[11]The apparent peace in the North is just related to the low attractiveness, the remoteness and the under-population of the Himalayan high mountains

[12]I further refer to the 3 waves as 1995, 2003 and 2010 since, for each wave, 75% of data collection occurred in the first of the two years.

[13]A rural ward roughly corresponds to a hamlet and is the smallest administrative unit in Nepal. In practice, the rural sample has at most one ward per VDC.

previously surveyed households in 75 randomly sampled rural wards of the first wave. Enumerators could find back almost 800 households. In 2010, the CBS tracked households in 35 of these 75 wards and in 40 of the 229 rural wards of the second cross-section. The sampling of wards was again random. On top of the three repeated cross-section, we have a rotating panel with 368 households surveyed three times, 424 households surveyed both in 1995 and 2003 and 434 surveyed in 2003 and 2010[14].

3.3 Household and conflict data

The existence of pre, contemporaneous and post-conflict household level data already is a major boon. Their combination with precise information on insecurity levels is a clear advance with respect to the quantitative literature on conflict. It avoids many drawbacks arising when recall data are used, both with respect to household behaviour and to conflict shocks. I also work at a very disaggregated level. It means that causes and consequences can be related with little aggregation bias and measurement errors, which often are at risk in the analysis of conflicts.

Figure 3 illustrates the partial temporal overlap between household surveys and the Nepal civil war. The solid red line displays the number of people killed by month between 1996 and 2006. Bars and the associated right scale stand for the number of cross-sectional wards surveyed in each month. The first wave of data collection started clearly before the onset of the conflict. The second wave of data collection lasted for one year and occurred shortly after the first intense period of the conflict and at the beginning of the second intense phase. The last wave of data collection happened in 2010, way after the end of the conflict.

[Insert figure 3 here]

For the short-term analysis, I focus on the second wave of the NLSS. Data collection started in April 2003 and ended up in April 2004. If the enumeration started during a cease-fire as underlined by the drop in the number of casualties at the beginning of 2003, a new violence episode broke out in September and the remaining data collection continued in times of war. Figure 4 illustrates the coverage of the 2003 survey and the spatial dispersion of the conflict[15]. The blue dots indicate that a village has been enumerated as part of the second cross-section. The darker red is a village, the higher the number of conflict related killings during the 13 months of the survey. CBS (2004) reports that interviewing households in

[14] Additional details on sampling methodologies are available in CBS (2009), CBS (2004) and CBS (2011).

[15] In the appendix, figures A1,A2,A3 and A4 provide the spatial dispersion of killings and the coverage of the survey by quarter

conflict affected areas was challenging. They however managed to do it, but for eight cross-sectional and four panel wards. Only eight wards of the 229 could not be surveyed as scheduled initially. For the panel, six of the 75 wards were visited during a second attempt. Considering that 2,678 people got killed during this period, the timely enumeration rate can be considered as a great record. Data quality is further discussed in the short-term identification strategy section.

[Insert figure 4 here]

The longer term analysis also rely on pre- and post-conflict data. Pre-conflict data picture livelihoods baseline levels unaffected by the conflict's extent and sequence. Post-conflict data incorporate the overall effect of the conflict on all Nepali households, and also the heterogeneous consequences of varying conflict intensities over time and space.

In this context and despite a smaller sample size, the household panel sharpens the understanding of potentially remaining estimation bias. I use the panel to estimate the medium term effects of war while controlling for unobserved time invariant characteristics at the household level. I test whether conflict related attrition is important too. In this sense, the panel is used to shed light on potential biases related to household selection in cross-sections.

3.4 Additional sources of data

The unit value price of timber imports in India comes from the International Tropical Timber Organization (ITTO). In yearly reports (ITTO, ears) and in its Annual Review Statistics database (ITTO, 2013), ITTO monitors the trade of primary wood products. More specifically, I use data on the yearly average import prices (in USD per cubic meter) of industrial round wood in India. Prices are differentiated for coniferous trees, non-coniferous tropical trees and non-coniferous non-tropical trees. The price is adjusted for the VDC biome data (MENRIS-ICIMOD, 2008). Figure A6 in the appendix shows the evolution of these three timber prices between 1996 and 2010.

The subsequent analysis also relies on satellite images from two different sources to measure environmental and climatic conditions at the VDC level. The Tropical Rainfall Measurement Mission (TRMM) provides monthly rainfall estimates at 0.25 degree grid square [16]. The TRMM is a joint project between the NASA and the Japanese Aerospace Exploration Agency which has been launched in 1997 to study tropical rainfalls. Various technological innovations (including a precipitation radar, flying for the first time on an earth orbiting satellite) and the low flying altitude of the satellite increase the accuracy of climatic measures. It is

[16] It roughly corresponds to 27 km in Nepal.

therefore well adapted to the Nepalese context. Interestingly enough, the TRMM products combine satellite measures with a regular calibration using monthly terrestrial rain gauge data. These are currently some of the most accurate measures of precipitations. Together with Baland et al. (2015) and Fetzer (2014), this paper is the first one to use these data in the economics literature, and the first to use them for Nepal.

I also use a VDC level Normalized Difference Vegetation Index (NDVI) to capture the greenness of a VDC in a given year. Using the MODIS sensor, NASA and Carroll et al. (2011) provide a bimonthly measure of the NDVI at a 250m resolution. The NDVI is defined as the ratio $\frac{\text{Near Infra Red - Visible Red}}{\text{Near Infra Red + Visible Red}}$. It proxies the amount of radiation captured by chloroplasts, which are green because they absorb all visible colours but green. The closer to one the ratio is, the denser is the vegetation cover of the pixel. In this project, and consistently with the bimonthly measure, I average, for each VDC, the yearly maximum of each VDC's pixel[17]. This variable intends to capture the peak biomass potential over the last 12 months in the VDC. It can be used as a VDC level control of the renewable natural resource productivity, including potential agricultural production.

4 Short-term effect of the conflict on households' choices

This section aims at estimating households short-term responses to violence episodes in their immediate neighbourhoods. I first discuss the econometric strategy before exposing results.

4.1 Identification strategy: the survey as a quasi-experiment

4.1.1 common wisdom approach

A naive approach to estimate the short-term effects of a conflict on a variable y, say income, can be written as:

$$y_{im} = \gamma_0 + \gamma_1 K_{\kappa_{vm}}^{[m-z;m-1]} + \epsilon_{im} \tag{1}$$

where outcome y of household i in month of survey m is a function of the number of killings K in the last z months in the κ kilometres around its village v. γ_1 is the average variation of y related to one more killing in the z months before the survey. ϵ is an idiosyncratic term.

[17]The observed maximum over the period is already what is done over the 16 days period of production. It reduces measurement errors related to cloud cover.

This approach might be misleading because of reverse causality or omitted variable bias. If belligerents target wealthier households, because the Maoists want to free Nepal from feudalism or because the Government overprotects richer households, then the estimation of γ_1 will be upward biased. If Maoists recruitment is easier in poorer areas or if poverty is correlated to remoteness, while remoteness eases up the insurgency, then we expect the estimation of γ_1 to be downward biased.

It is therefore crucial to compare comparable households facing different conflict intensities. This is straightforward in a thought experiment where citizens would be randomly killed across the country. In such a case, a difference in means would suffice and the equation (1) would be the right model. This thought experiment is however not feasible nor desirable in the real world. Hence, I propose to use the timing of the survey as a source of exogenous variation in conflict exposure.

4.1.2 Intuitive approach

Intuitively, consider four villages, A, B, C, and D. By design of the survey, let's assume that households in the first two villages are enumerated in May and in July for the last two. This sequence has been arbitrarily determined before the survey starts. Let's further assume that someone got killed in June close to villages A and C, far away from villages B and D. Then, the following model could be estimated:

$$y_{im} = \alpha_0 + \alpha_1 K_{\kappa vm}^{[m-z;m-1]} + \alpha_2 K_{\kappa vm}^{[m-z;m+z-1]} + \alpha_3 \text{July}_m + \eta_{im} \tag{2}$$

In this intuitive model with four villages and one casualty, the dependent variable y is a function of the number of conflict related killings K. The first variable, $K_{\kappa vm}^{[m-z;m-1]}$, captures the number of killings in the z months before enumeration in the κ kilometres around the village v. It is equal to one only for households living in village C, enumerated in July. The second variable, $K^{[m-z;m+z-1]}$ is the number of killings around the enumeration month. It is equal to one for villages A and C and zero for the two others. In terms of interpretation, the parameter α_1 captures the differential effect in y of being exposed to one more casualty just before the survey, compared to experience it just after. By design of the survey, A and C are statistically similar sampling units. They face the same potential violence around the survey date, but at the time of enumeration, only inhabitants of village C had a direct experience of violence in their neighbourhood. Of course, villages A and C are systematically different from the two others because they were potentially affected by the same strictly positive level of violence. This systematic difference is captured by α_2, the parameter associated with the level of violence around the survey. The parameter α_2 captures the correlates of household exposure to current conflict conditions. It includes adaptation to anticipated levels of violence in the κ kilometres around the village as well as short-term general strategies of the

belligerents. The specification (2) also incorporates a month fixed effect to partial out the estimation of α_1 from seasonal fluctuations.

This econometric strategy is close to Miguel and Kremer (2004) when they identify the treatment externalities of a deworming treatment on education and health outcomes of students. In their main specification, they control for the total number of schools in a given area, a potentially endogenous variable, to infer the effect of the treatment by estimating the parameter associated with the total number of treated schools in this area. In this paper, I control for the total number of killings in a given area over a arbitrary period of time, and the key orthogonal variation comes from the predetermined random timing of the survey and not from the random treatment assignment over space.

4.1.3 Econometric specification

The model presented in (2) can be extended for a continuous measure of conflict intensity and additional controls. Econometrically, the short-term estimation strategy is written as

$$y_{im} = \beta_1 K_{\kappa_{vm}}^{[m-z;m-1]} + \beta_2 K_{\kappa_{vm}}^{[m-z;m+z-1]} + \beta_3 K_{\kappa_{vt}}^{[onset;m-z-1]} + \mathbf{X_{im}}\mathbf{\Phi} + \lambda_l + \mu_m + \varepsilon_{im} \quad (3)$$

in which the outcome variable y, say income, is a function of the killings in the last z months, $K^{[m-z;m-1]}$, controlling for the number of killings in the z months before and after, $K^{[m-z;m+z-1]}$. Additional controls include the number of killings from the onset of the conflict till $z-1$ months before the survey, $K^{[onset;m-z-1]}$, a vector of control variables $\mathbf{X}$ as well as spatial and temporal fixed-effects. ε is a idiosyncratic component.

The causal interpretation of β_1 relies on several assumptions. First, conditionally on controls, the timing of enumeration has to be orthogonal to the conflict expansion. Second, the correlation between killings before and after the enumeration should be relatively small to allow the estimation of β_1. Third, the quality of the survey has to be independent to the conflict. Fourth, the pool of households enumerated in a given village should not be affected by the conflict. Fifth, households should not perfectly anticipate violence. Sixth, villages experiencing similar level of violence around the survey should follow a parallel trend. Under these assumptions, the coefficient of interest β_1 captures the differential effect of experiencing one additional casualty before the survey compared to have it just after.

4.1.4 Important assumptions: discussion

The short-term identification strategy of this paper relies on the randomness of the enumeration timing so as to create a quasi-natural experiment. Due to the

extent of the survey, the 229 wards could not be surveyed at the same point in time. 13 months were necessary to enumerate the 2,748 households of the second cross-section. To guarantee a representativeness of seasons, the CBS surveyed different wards in different months within the same region. On top of the qualitative information reported in the data section which support the claim that primary sampling units could be enumerated as planned, I can build a test of orthogonality between the survey process and the conflict expansion. Knowing the spatial and temporal distribution of killings during the whole duration of the survey I can try to predict the enumeration of a ward using violence over the last months. Based on equation (3), the following equation formally tests the quasi-randomness assumption:

$$surv_{vm} = \beta_1 K_{\kappa_{vm}}^{[m-z;m-1]} + \beta_2 K_{\kappa_{vm}}^{[m-z;m+z-1]} + \beta_3 K_{\kappa_{vt}}^{[onset;m-z-1]} + \mathbf{X_{im}}\mathbf{\Phi} + \lambda_l + \mu_m + \varepsilon_{im} \tag{4}$$

where the dependent variable is a dummy variable indicating if the sampled village v got surveyed in month m. Estimation of equation (4) is restricted to the set of villages surveyed and to the duration of the survey. Table 1 reports estimations of equation (4) by a linear probability model for a distance of 20km. The coefficient of the number of killings 3, 6 or 9 month before is never statistically significant, with or without controls for environmental conditions, such as NDVI or rainfall z-scores (even columns). Correcting standard errors for spatial autocorrelation using Conley (1999) does not affect the conclusions[18]. In the appendix, figure A7 reports the average effect of the conflict on the probability to enumerate households in a VDC in a given month, using month windows ranging from one to twelve months. The four graphs, from top to bottom and left to right, respectively correspond to casualties within, in the 10km, 20km and 40km around the village. All coefficients plotted in this figure are estimated following equation (4) with an empty $\mathbf{X}$ vector. It confirms that, conditionally on fixed-effects, the enumeration timing is statistically orthogonal to the conflict expansion.

[Insert table 1 here]

The weak correlation between killings before the survey and after is a more technical requirement. The survey could well be orthogonal to the conflict, but if the conflict intensity does not vary at all over time, the variance of the estimator of β_1 would be infinitely large. Figure 5 reports the correlation between demeaned killings before and after enumeration[19]. This correlation is equal to 0.073 in the

[18]The correction is performed following Hsiang (2010), tables available upon request.

[19]"Demeaned" stands for the fact that killings are partialled-out from month and belt-zone fixed effects.

three months window and to 0.11 in the six months window. The inflation of the variance due to collinearity thus remains moderate.

[Insert figure 5 here]

Figure 5 also shows that the distribution of killings in the 20km around the village is very similar before and after the survey, using a three or a six months window. The left column reports kernel densities of both distributions for the 229 villages of the second cross-section. Distributions overlap nicely, both if we consider killings three months (top row) or six months (bottom row) around the survey. The overlap is even more striking in the right column which displays the corresponding quantile-quantile plots allowing a finer comparison of the two distributions. The small discrepancy between the two distributions only comes from the distribution's tails. The similarity between distributions is consistent with a quasi-randomness of the enumeration timing, conditionally on temporal and spatial fixed-effects.

A threat to identification strategy could arise from variations in the quality of data. Hatlebakk (2007) shows that this should not be a worry. Enumerators did not spend a different amount of days in areas controlled by the Maoists. Response rates are very similar. Standardized answers like 0 and 5 are not more frequent. There is no evidence of Maoists influence on critical questions like the minimal daily wage. Standard deviations of critical variables are stable. The author concludes that the quality of data in 2003 is not different from data collected in 1995, before the conflict.

Another concern is representativeness of the cross-section collected during the war. Data correctly reflect rural Nepal only if households' conflict related migration is limited. While I cannot explicitly measure migration, I use the panel to show that conflict related attrition of households was not large. This indirectly shows that households, as a whole, did not migrate more in conflict zones. For individuals, variations in households size provide a more precise, however implicit, measure of migration. This is widely discussed, among other results, in the next subsections.

The relevance of the method also hinges on limited households' anticipations of conflict intensity. If households anticipate perfectly the conflict intensity, then, there should not be any differences between experiencing killings just before or just after enumeration. In such conditions, β_1 should not be different from 0. Under imperfect anticipations, the effect of conflict intensity on household choices therefore tend to be underestimated.

The last and crucial assumption is that villages facing similar level of violence actually follow a parallel trend. This assumption is first weakened by the presence of a large set of controls in equation (3). β_3 captures the correlates of household

exposure to historical levels of violence. It is potentially affected by the Maoists long term strategy and by Governmental responses. Month specific parameters μ control both for the general rise in violence during the survey due to the end of the cease-fire and for seasonal effects. 33 belt-zone specific parameters λ restrict the estimation of the coefficient of interest to villages in comparable areas. Belt-zones are defined as the interaction between ecological regions and administrative areas. Mountains, Hills and Terai form the three main ecological regions of Nepal and are located along a North-South gradient. The 14 administrative zones are organized on a West-East gradient[20]. Hence, the interaction captures systematic differences in ecological conditions and long-term development which are highly correlated with the distance to Kathmandu. $\mathbf{X}$ is a vector of control variables including rainfall anomalies (z-scores) and greeness of vegetation (NDVI) of the village associated with a vector of parameters Φ. It is important to control for rainfall and biomass potential since micro-spatial variation of ecological conditions could determine both the level of violence in a specific area and outcome variables of rural households.

As in any study relying on parallel trend assumptions, controls, despite their number, might still be insufficient to guarantee the parallel trend assumption. This study is partly an exception. Indeed, the fact that village A was surveyed before C is purely random. The two villages are *ex-ante* statistically similar and, by the law of large numbers, have on average, the same trend. On top of that, trends are short since we mostly focus on the 6 months before and after the survey. This further strengthens the credibility of the parallel trend assumption.

4.2 Results

The short-term analysis relies on the cross-sectional regression presented in equation (3). Each household i is observed once, in month m. The dependent variables are different outcomes important to understand household livelihoods in war times. The next tables report estimations for $z = 6$ and $\kappa = 20$, i.e. I report the effect of violence in the last six months and in the 20 kilometres around the village. This specific choice is arbitrary, clarifies the exposure, is discussed later on and does not affect conclusions. For each dependent variable, results appear first without additional controls and second with controls for rain deviations and greenness in the last twelve months. Both estimations include months and belt-zone fixed effects.

This subsection is organized in three parts. I start with short-term effects on the whole rural population, continue with heterogeneous responses for high castes versus non-high castes and finally discuss mechanisms behind and robustness of the results. In terms of themes, I first consider the short-run impact of conflict on

[20]See figure A5 in appendix for a map of belts and zones.

changes in household income and decompose it by sources. This raises the question of labour allocation and production decisions. I then analyse how it translates into consumption choices. The main insight is the drop of income for all households, but especially more for high castes, the additional working time of non-high castes in agriculture and the fact that high castes resort to migration.

4.2.1 Short-term effect of the conflict

Additional killings have large and statistically negative effects on total household annual income. Estimation (2) in table 2 shows a drop of annual income by 1,257NPR_{2010} when one additional person got killed in the 20km around the village during the six months before the survey, compared to having this person killed in the six months just after the survey[21]. The average short-term effect of increased violence before the survey is equal to -15,164NPR. It represents a sizeable drop by 15% with respect to the average annual household income of 104,727NPR, reported in the penultimate line of the table. This conclusion is robust to controlling for environmental conditions, like rain and greenness of the area.

[Insert table 2 here]

The survey details allow decomposing income components and further precise the effect of violence. Decreasing income from non-agricultural labour and transfers - remittances and pensions - accounts for most of the total income reduction. Columns (5) and (6) in table 2 show that income generated by non-agricultural labour represents one third of the total annual income and it drops by one third. The fall of transfers in the last two columns is relatively comparable in proportion but smaller in absolute value. There might be a small compensation through agricultural labour income but it is anyway not sufficient to stabilize income as shown in columns (3) and (4).

Labour allocation mirrors changes in income. The time spent by households in non-agricultural wage employment - paid on a daily up to monthly basis - diminishes by 20% on average. Estimations (1) and (2) in table 3 indicate that every additional conflict related casualty before the survey reduces wage work time by roughly one workday per year. The effect is almost identical for non-agricultural own-labour but statistically less precisely estimated. Agricultural labour represents the bulk of household annual work time and is stable if not increasing slightly as reported in column (8).

[Insert table 3 here]

[21] All monetary values are computed on an annual basis. They are expressed in NPR_{2010} using the price deflator proposed by the CBS. Results are not affected by this choice since regional variations in price levels are capture by belt-zones fixed-effects

Falling income does affect household consumption. One additional casualty decreases household total annual consumption by 1,344NPR (estimation (2) in table 4). This magnitude mirrors the estimated effect on income. The reduction of consumption is only partly related to a drop in frequent consumption expenditures, as reported in columns (3) and (4). However it is not due to a fall of food consumption. Households actually cut their expenses in frequent non-food expenditures - like fuel, transport and personal care -, in infrequent expenses, in durable good acquisition as well as in schooling and health expenditures[22]. The last two columns show that household size is stable. Therefore, the reduction of income and consumption is not driven by the departure of household members. On the contrary, it reflects a real drop in household living conditions.

[Insert table 4 here]

4.2.2 Heterogeneous effects by caste

The conflict did not affect all groups of the population in the same way. From Maoists rhetoric and deeds, Hindu high castes of the Hills were specific targets. They had therefore specific reasons to be affected and to react in different ways than the overall rural population. I therefore estimate a modified version of equation (3) by including a dummy variable indicating whether the household is Brahmin or Chhetry and its interaction with violence measures.

High castes have a significantly higher income on average than others. Their income drops significantly more in conflict times compared to the remaining part of the population. This is true both in absolute value and in proportion. Estimation (2) in table 5 shows that the effect of an additional conflict related casualty for the overall population is -1,004NPR. The additional marginal effect for high castes is -1,785NPR. On average, there is a reduction of household income of non-high castes by 12,107NPR. This represents 12% of the average income of this population group. For the high castes, the average net effect on income reaches -33,637NPR. This amounts to more than 30% of their average income. This average effect should be compared to the 36,684NPR annual household income differential between high caste households and others estimated in (2) by the parameter associated with the high castes indicator variable. In other terms, the short term average effect of the conflict has drastically reduced the income gap between high caste and others.

The large additional reduction of non-agricultural labour income drives most of the differential in the total income decline as shown in estimation (5-6) of table 5. Specification (6) tells us that one more killing around the village decreases all household non-agricultural labour income by 771NPR. For high castes, there is a statistically and economically sizeable additional contraction of 1,476NPR. On

[22]Tables available upon request.

the other side, non-high caste households generate a slightly higher agricultural labour income since the interaction term for high castes cancels the effect for this last subgroup (columns (3-4)). All households suffer from a reduction of transfers and, in this dimension, there is no difference between high castes and others as shown in columns (7) and (8).

[Insert table 5 here]

If non-agricultural labour income goes down, especially for high castes, it is directly related to the drop of work time in self-employment in non-agricultural activities. One additional person killed around the village reduces the annual work time of high caste household men by 15 hours, almost two working days. It has no significant effect on the rest of the population. On average in the short-term, the conflict reduces men work time of high caste households in non-farm business activities by more than 200 hours on an annual basis (see specifications (7-8) in table 6). Men self-employed labour in agriculture increases by 10 hours per additional killings following violence episodes but only in non-high castes households. It represents a 10% of non-high caste self-employed labour in agriculture[23].

[Insert table 6 here]

Household size varies differently between high castes and others, with high castes losing their young males while other households size remain stable. The first two columns of table 7 report the estimation of household size as a function of conflict intensity. There is no short-term relation between violence and household size for non-high castes households. For high castes, there is a significant negative effect on household size, with an estimated drop of 0.03 members when one additional person got killed in the surrounding 20km. It means that, on average, and in the short-term, the conflict has pushed one person in every three high caste households to leave it. Columns (3) to (6) indicate that the effect is largely driven by the departure of young males between 16 and 49 years of age. On average, one high caste household out of five loses a productive male[24]. Notice that the departure of productive males is not compensated by hiring workers, as reported in the last two columns of table 7. On the contrary, high caste households reduce expenses related to payments compensating agricultural casual workers.

[Insert table 7 here]

[23]The work time in non-agricultural wage labour paid on monthly basis decreases both for high castes and others but not differentially across the two groups. Tables available upon request.

[24]Within this broad age class, the effect is larger for younger male but the statistical power goes down as I slice the age classes.

4.2.3 Mechanisms and robustness

Violence episodes in the vicinity of households have an immediate negative effect on their non-agricultural income, their consumption expenditures and push productive males of the high castes to leave villages in conflict zones. Behind these measured effects are increased isolation and Maoists' taxes/extortions. Long-term workers in rural areas are, for more than 40%, employed as teachers, health practitioners and civil servants. They are known, identifiable and have a regular source of income. They thus make up easy targets for a rebellion in need of cash. There is small negative effect on casual work outside agriculture. Knowing that 54% of casual workers out of agriculture are engaged in the construction sector, this is far from surprising. The conflict severely affects self-employed businesses out of agriculture, especially for high caste households. These businesses very often are active in the retail trade, the restaurant or the food processing sector[25]. Such occupations require frequent connexions between villages and between villages and urban areas, both to reach suppliers and to attract consumers. Last but not least, transfers, whether they are pensions or remittances, decline. Indeed, someone has to channel them to recipients from distant urban areas. In war times, carrying cash is risky both for the handler and the handled. This explains why they fall, contributing to the sharp decline in household income.

One could wonder whether the decreasing income is not simply attributable to taxation and extortions imposed by the Maoists. This might be part of the story and no question allows to directly address transfers to Maoists. However, looking at various consumption items and at labour allocation, it appears that actual taxation *per se* does not fully explain income reduction. First, income and consumption approaches yield similar estimates of the consequences of violence despite the fact that households are not asked to report a post-tax income. Second, the decomposition of consumption by items shows that the reduction in consumption expenditures is partly driven by education and health expenses. It reflects the income drop of teachers and health workers. Third, real effects in terms of working time mirror income variations[26]. It means that insecurity also affects income through labour reallocation. Fourth, one productive male is missing in every five high caste households. I interpret this fact as a short-term life protection decision and a medium term economic diversification strategy. In the short-term, these males escape violence. In the medium term, they might generate income in other areas and bring it back in some form.

As for migration, the magnitude of the effect could be dampened if (forced) recruitments and conflict casualties were likely to have sizeable effects on household

[25]source: NLSS2, author's calculation.

[26]This also reassuring if we would suspect households to strategically under-report their income after violent events.

size. Considering the 1,070,000 high caste households living in rural area at the beginning of the 2000's, it means that more than 200,000 productive males left their households in reaction to spikes of violence[27]. It cannot be explained solely by forced recruitments and conflict related casualties. There were less than 14,000 people killed during the conflict and the PLA comprised around 10,000 cadres in 2005 (Mehta and Lawoti, 2010, p.179). This is almost negligible compared to the estimated additional migration, especially if we take into account that Brahmins and Chettrys were not the bulk of recruits in the PLA. Hence, the high number of missing men has to be the result of out-migration. The destination of these migrants is not known. It might result from a displacement effect from risky zones to safer rural areas. While I cannot completely rule out rural to rural migration, most of the displaced people moved to urban centres, where governmental control was sufficient to guarantee a relative security, or to foreign countries.

The mechanisms described here are robust if I modify the month or kilometre window. Figure 6 plots the estimated average effect of killings on annual total income, based on equation (5), for a one to twelve months window and killings in the ten, 20, 30 and 40 kilometres radius. The average estimated effect of specification (1) in table 2 is the six months value of the top right graph. Even if all coefficients in the figure are negative, they become statistically significant only for time windows that are large enough. As the window increases, the effect becomes larger in magnitude and statistically significant. The influence of distance is similar. For short and long distances, estimates are very imprecise. The sharpest effects are estimated for distances between ten and 30 kilometres.

[Insert figure 6 here]

The low precision for small values of m and κ is related to the low statistical power. The number of killings before (and after) tends to zero in more and more villages as windows get tighter. For large month windows[28], the effect on total income tends to fade out. I interpret this as a progressive absorption of the casualties effect by the overall level of insecurity, which is captured by the killings in the area around the enumeration.

Household size dynamics show persistent effects over time for high castes. For the whole population, as reported in specification (1-2) of table 4 and in figure 7, household size is relatively stable. The average differential effect for high castes in table specification (1-2) of table 7 and in figure 8 depicts a clear out-migration in this population subgroup. If the effect is not precisely estimated in the very short-run, it becomes neater as the month window enlarges. It pushes forward a story

[27]Source: author's calculation based on NLSS2.

[28]I do not extensively discuss the effect of an increased kilometres radius on estimates. The larger κ becomes, the smaller are variations in exposition between villages and precision vanishes.

where the violent episodes of having people killed close by has a ratchet effect on the migration decision. Migration of individuals does not take place immediately but once it occurs, it tends to last.

[Insert figure 7 here]

[Insert figure 8 here]

The framing of questions is also important to understand the time structure of effects. Almost all of the questionnaire is framed in terms of *"past twelve months"* and *"typical month"*. It means that households smooth their answers over the period and therefore reduce the short-term effects of conflict on outcomes. For consistency of measures in the whole survey, I have computed all values on an annual basis. However if I focus on disaggregated measures, short-term measures are more reactive. For instance, health expenditures for illnesses in the last 30 days are more affected than health expenditures for chronic illnesses over the past twelve months. Using the activity roster, I provide, in appendix, estimates of labour allocation in the last seven days. Tables A1 and A2 respectively mirror tables 3 and 6. Coefficients go in the same direction and are more precisely estimated.

Interpretations assume up to now that the sample of households is representative of the rural population. Yet, in war times, entire households migrate as well. While I cannot use the cross-section to analyse household migration, the panel allows an indirect measure of potential migration if one looks at attrition. Using the 75 villages of the panel, I can estimate the following model:

$$A_{i2003} = \beta_1 K_{\kappa v}^{[m-z;m-1]} + \beta_2 K_{\kappa v}^{[m-z;m+z-1]} + \beta_3 K_{\kappa vt}^{[onset;m-z-1]} + \mathbf{X_i \Phi} + \mathbf{X_i K \Psi} + \lambda_l + \varepsilon_i \quad (5)$$

where A, a dummy variable indicating whether a household i could not be surveyed in a village selected for the 2003 panel is a function of the number of people killed in the κ kilometres around village in the m months before, the $2^{\star}m$ months around and between the onset of the conflict and $m-1$ months before the 2003 survey. A vector of household level controls $\mathbf{X}$ is included and eventually interacted with the three conflict measures. λ is a belt-zone specific parameter while ε is an idiosyncratic term. βs, $\mathbf{\Phi}$ and $\mathbf{\Psi}$ denote parameters and vector of parameters to estimate.

Table A3 indicates that the short-term intensity of the conflict does not increase general attrition. In all specifications, the number of people killed around the village is never statistically significant, and therefore does not contribute, as such to the 14% attrition rate. Conclusions remain similar if I take a more simple measure of the conflict, like the number of people killed between the two rounds

of the panel. Still, it is interesting to understand household level correlates of attrition. The second specification of table A3 shows that neither pre-war income nor asset holdings allow to predict attrition[29]. Large and non-high caste households have a higher probability to be resurveyed. This differential attrition rate does not impact my conclusions as long as high caste and small households disappear at the same rate whatever the conflict exposure.

Specification (3) shows that despite a higher overall attrition of high caste households, their attrition is smaller in villages witnessing higher conflict intensity. If attrition can be interpreted as household migration, then high caste households migrate less after violent events. On the other side, we already know that productive men do migrate more in these areas. One possible interpretation is that, when high caste households cannot migrate as a whole, they send members at risk out of conflict zones. The last two columns add controls for total income, households size, land ownership and big livestock as well as their interaction with the three measures of conflict. None of the interactions is statistically significant. Results on the main variables are stable[30].

The short-term results are robust to several additional tests. First, removing the number of people killed between the onset of the conflict and seven months before the survey does not alter any conclusions. Actually, estimates are even more precise. This is not a real surprise since belt-zone fixed effects and killings in the window around the survey already control for many factors. Results are also stable if I remove the villages where no one was killed in the six months before or after the survey, reducing the sample by 177 observations. Last, conclusions are unaffected if I remove the killings within the village over the period from the different killings variable. This rules out explanations in which the death within potentially enumerated households could drive the causal mechanism.

5 Medium term consequences of the conflict

The persistence of short-term adaptation strategies emerges as a natural question after the previous section. How far do immediate responses shape recovery trajectories? Do they affect the development path of a country? Based on the last two survey waves, this section compares household level outcomes between 2003 and 2010 as a function of conflict intensity. I first describe the medium term identification strategy. I then present results showing how the conflict affects households

[29] Pivovarova and Swee (2015) suggest a negative relation between attrition and landholdings but this is driven by a composition effect when urban and rural households are mixed in the same sample.

[30] All conclusions hold if I use a more simple measure of the conflict, i.e. the number of people killed in the 20km around the village between 1995 and 2003

level outcomes in rural areas.

5.1 Identification strategy and econometric specification

The richness of the household survey allows following households during and after the war. To understand how they recover, one direct approach is to analyse how changes at the household level are related to variations of conflict intensity in the household's vicinity. In terms of econometric modelling, the relation can be written as:

$$\Delta^{2010-2003} y_i = \alpha \Delta^{2010-2003} Killings_{v_\kappa} + \Delta^{2010-2003} \mathbf{X}_i \psi + \lambda_l + \Delta^{2010-2003} \varepsilon_i \quad (6)$$

in which the difference in the outcome y of household i between 2010 and 2003 is a function of the change over the same period in the number of killings in the κ kilometres around the village v where the household lives. $\mathbf{X}$ are time varying control variables. λ is a set of five region specific parameters controlling for differential trends at the regional level. It is important because regions are the spatial level of the deflator proposed by the CBS for 2003. It avoids to mix up the effect of inflation - which is potentially affected by the conflict - with the effect of additional casualties. ε is a household specific component and α and ψ respectively are a parameter and a vector of parameters to estimate.

The first difference removes all unobserved and time unvarying heterogeneity at the household level. Two potential concerns may arise in such specification. First attrition might be conflict specific, something discussed later on. Second, despite the presence of region specific trends, the dependent variable, say income, might still partly be endogenous to the conflict. This would be the case if casualties, in the last years of the war, were concentrated in faster growing areas. A potential solution is to rely on a two-step procedure in which conflict intensity is exogenously predicted in the first step. This is feasible because the People's war specificities provide us with an interesting predictor.

Maoists had financing needs. One of the important income source was the control of timber smuggling to India (ICG, 2005). I therefore propose the price of imported timber in India interacted with the inverse of the distance to the Southern border of Nepal as exogenous predictor of the number of casualties around a surveyed village. The first stage equation is written as

$$K_{tv_\kappa} = \rho K_{t-1,v_{\kappa km}} + \gamma_1 \text{wood price}_{vt} + \gamma_2 \frac{\text{wood price}_{vt}}{\text{distance to India}_v} + \mathbf{X_{vt}} \zeta + \tau_l + \upsilon_v + \eta_{vt} \quad (7)$$

where the number of killings K in the κ kilometres around the surveyed village v in year t is a function of the number of killings around the same village in the

previous period, the price of imported timber in India and the interaction between this price and the inverse of the distance to India. $\mathbf{X}$ is a vector of controls, including rainfall anomalies and greenness (NDVI). τ and υ respectively are year-region trends and VDC specific parameters while η is an idiosyncratic component.

The exogenous predictor is composed of two parts: the price of timber and the distance between the VDC and India. First, the relevant price of imported timber in India varies spatially across Nepal because there exists different markets for timber and different biomes for trees. ITTO (2013) divides the price of timber in three broad timber categories: coniferous trees, non-coniferous tropical trees and non-coniferous trees (Figure A6 draw their variations over time). I match each VDC with the relevant price according to its dominant biome. Second, the distance to India is computed as the distance between a VDC centroid and the Southern border of Nepal. Most of Nepali international trade goes through its Southern border, the Northern border being too mountainous to allow for regular transportation of heavy goods like timber[31]. Following Samuelson (1954), I assume that the transport cost is a share of the traded good total value. The use of the ratio between timber price and distance to India is the econometric translation of the *"iceberg cost"* model. It implies that the value of trade decreases proportionally with the distance to the trading partner.

I estimate equation (7) for years between 2001 and 2006. It corresponds to years where the conflict started to expand from Maoists' base areas and to spread over the whole country[32]. The predicted number of casualties is then aggregated over the relevant period and plugged into equation (6), the second stage of the two-step procedure. Table 8 presents various specifications of equation (7), modifying the set of controls. The estimation of the first stage eventually used is presented in column (4). The coefficient of the interaction between wood price and the inverse of the distance indicates that there were more casualties around surveyed villages as wood price of timber went up, and this was especially true as villages were closer to the Indian border. There were also more killings in years witnessing positive rainfall shocks and where NDVI was larger. It is an indication that the conflict was more intense in areas where agricultural income was potentially higher.

[Insert table 8 here]

The validity of an instrument requires both relevance and validity of the exclusion restriction. The exogenous predictor is statistically strong as its $F - stat$ of 16.16 is above the commonly accepted threshold of 10. It is also relevant from an historical perspective. As discussed in the context section, timber trade was

[31] Due to the shape and geography of Nepal, flat Western and Eastern borders are negligible.

[32] As stated by Maoists, this corresponds to the "strategic balance" and the "strategic offensive" phases of their strategy.

a source of finance for Maoists. *"The Nepal army and the Maoists needed forest products to maintain their presence in rural areas. They needed fuelwood and grazing for animals and timber for construction, whilst the Maoists needed timber to sell as a source of revenue"* (LFP, 2010). The sign of the coefficient indicates that there were more people killed as the revenue potential of timber went up in a given VDC. Results are thus consistent with anecdotal evidence.

Regarding the exclusion restriction, the instrument should not be directly related to the outcome y, conditionally on controls. First, it is very unlikely that the conflict has affected timber prices in India. Nepal is small enough to have a negligible impact on imported timber prices in India. Over the period 2001-2006, India imported more than 20 million cubic meters of industrial round-wood while Nepal officially exported 1,240 cubic meters[33]. Even if illegal trade could have been large, it remains tiny with respect to Indian imports. Second, VDC fixed-effects capture any time unvarying characteristics - like distance to India, hilliness, etc. - which could affect the conflict and be correlated with the instrument. Third, the set of controls includes a year trend and the price of imported timber in India. It allows to capture factors changing over time and potentially correlated with the conflict, like the general rise of conflict intensity over the period and the dynamism of the Indian economy, which is also potentially correlated with wood prices.

Despite this large set of controls, we might still be worried that the instrument directly affect our outcomes of interest. It would be the case if many villagers derive their income from timber exploitation. Higher prices close to India would push their income upwards, attract Maoists and generate a positive correlation between income and casualties. The same type of correlation could arise if "People's Governments" could use their resources to build infrastructure, improve irrigation and reduce poverty.

These channels however are of limited importance. In 2003, only 2.15% of rural households declare to have a non-agricultural business in the forestry sector. There is no evidence that the conflict had a positive effect on running such activities. If any, the conflict even had a deterrent effect on forest resource exploitation. Thapa (2004, p.146) reports that *"traditional livelihood opportunities such as going to the forest to collect non-timber forest produce has been disrupted because anyone found in the forest has been liable to be treated as a Maoist"*. The ability of villagers of going into the forest was reduced by fear of being caught in crossfire between the Maoists and the Nepal Army (LFP, 2010). To answer such concerns, I estimate the relation between wood prices and various pre-conflict outcomes. More precisely, table A5 displays results based on the 1996 cross-section and show that the instrument is not correlated with outcomes potentially affected by the demand for industrial roundwood. Specification (1) shows that income is not correlated

[33]Source: author's calculation based on ITTO (2013)

with the ratio between timber price in India and the distance to India. It is also true for consumption (Specification (2)), household size (3), non-agricultural income (4) or labour time (6), casual labour income (5) and income from casual labour out of agriculture (7). These results further establish the validity of the strategy.

5.2 Results

In this subsection, I analyse effects of variations in conflict intensity exposure on a set of rural household level outcomes. Conflict intensity is measured as the number of people killed in the 20 kilometres around the village between the 2003 and 2010 survey wave. Results reported in the next five tables are all presented in the same way. Every table displays estimation results of equation (6) for two outcome variables. The first two columns report ordinary least square estimations and the next two report results based on the two-step procedure described in the previous subsection with clustered bootstrapped standard errors based on 500 replications. Columns with even numbers focus on the average effect of killings. Odd columns include an interaction term between killings and an dummy variable indicating whether the household belongs to high caste groups, namely Brahmin and Chettry. They therefore emphasize potentially diverging paths across caste statuses. All regressions include region specific trends, controls for price of timber in India, rain anomalies and NDVI at the village level. Last, all parameters are identified on variations in conflict intensity across time and space in the last year of the war. As in the short-term strategy, all interpretations should be read in terms of deviation with respect to the mean trend. Our paper addresses heterogeneous changes across rural Nepal, not homogenous ones (like the overall decline in poverty or the general out-migration trend).

Self-employment in agriculture is the main occupation in rural Nepal. Between 1995 and 2003, the average self-employed labour time in agriculture has been stable at around 3,350 hours per year and per household. It represents 70% of the average working time in rural areas. Between 2003 and 2010, the self-employed labour time in agriculture went down by 1,400 hours to reach 1,956 hours, which only represented 53% of total work time, as shown in table A7. Column (1) of table 9 indicates that this reduction is more pronounced in areas where the conflict was more intense. The estimation of column (2) shows that the story differs across caste status. High castes reduce their work time in self-employed agricultural activities by 6.7 hours more than others for every additional casualty between 2003 and 2010. The average differential effect on high caste work time amounts to 500 hours, more than half of the trend differential between high castes and others. The two-step procedure, reported in column (4) confirms this divergence, even though point estimates are smaller in magnitude than in the OLS estimation.

The main difference between the OLS and the two-step procedure is the positive and significant effect of killings on non-high caste households work time in self-employed agricultural occupation.

[Insert table 9 here]

This finding is consistent with short-term results showing that high castes were leaving agriculture while others would invest more into it. It is also in line with the overall trend observable in the cross-section. High castes average working time in self-employed agricultural labour went down from 4,048 hours in 1995 to 3,749 hours in 2003 and 1,928 in 2010. For other households, there is first a slight increase from 2,954 hours in 1995 upto 3,180 hours in 2003 and finally down to 1,970 hours in 2010 (see table A8 and A9). The differential intensity of the conflict has thus mitigated the drop for non-high caste households.

While beneficial in the short-term, the relatively more important reliance of non-high castes on agriculture proves to be detrimental in the medium term. Column (5) to (8) indicates that an additional conflict related casualty has not increase income generated by self-employment in agriculture. Even if it is not precisely estimated, column (7) suggests that in a village exposed to the average level of violence, households experience an estimated reduction of 3,484NPR, around 10% of the average income generated by self-employment in agriculture. It is however hard to conclude whether high castes, who have reduced their work time in this type of occupation, face a larger drop than other households.

The diverging tracks between high castes and others in terms of agricultural labour allocation transcribes in diverging paths in terms of overall working time, something which can be related to changes in household size. OLS estimations for total working time are reported in table 10. Column (2) shows that results are similar to those obtained for self-employed agricultural labour. Estimation (3) shows that households increase their work time by 3.8 hours for every additional casualty in their neighbourhood. This effect is clearly driven by non-high castes as depicted in column (4).

[Insert table 12 here]

Changes in work time might partly be a consequence of changes in household size. Given the overall negative trend of household size, estimation (6) of table 10 suggests that the household size of non-high castes has decreased less in area where the conflict was more intense. In other words, they have maintain their labour force more than high castes in these areas. For high castes, the net effect is not statistically different from 0, if not slightly negative. The two-step procedure yields coefficients of the same sign but of a lower magnitude. Table A6 in the appendix

shows that this difference across caste status is driven both by the relatively less important departure of productive females and males of the non-high castes. It confirms that the differential reduction of work time is related to changes in the household size and composition.

Given the importance of migration and remittances in the post-war Nepal, the departure of productive household members needs to be related to transfers received by rural households. The first four columns of table 11 suggest that transfers received by households in areas more intensely affected by the conflict increased less than in other areas. A decomposition of transfers shows that the conflict has reduced the remittances received from Nepal by non-high caste households. One more casualty decreases these in-flows by 20NPR (specification (8)). In the average village, remittances received from Nepal would have been reduced by -2,330NPR, a sizeable amount compared to the 6,900NPR received by an average non-high caste household. For high castes, the net effect of killings is not statistically different from 0.

[Insert table 11 here]

Table 12 suggests that the conflict has increased the income and consumption gap between high castes and others[34]. OLS estimates for both income and consumption per capita show that high castes in conflict area have done much better in terms of income and consumption per capita that other households. An additional casualty raises high castes' income per capita by 169NPR and consumption per capita by 324NPR more than others. The net effect of the violence on high castes' income in an average village is to increase per capita income by 13,634NPR and consumption per capita by 23,805NPR which correspond respectively to one third and 40% of the average income and consumption per capita in 2010 for this subgroup of the population. Estimations using the two-step procedure are less precise and of a lower magnitude but go in the same direction. The reduction in the size of coefficients might indicate that violence in the last year of the conflict was more concentrated in areas where inequalities between high castes and others were growing, an argument consistent with Macours (2011).

[Insert table 12 here]

5.3 Discussion

In light of the previous results, we have both immediate responses in times of war - the short-term - and changes between war time and peace time, as a function of

[34]Per capita measures are build using different weights for household members. The first adult is fully weighted, other adults have 80% of the first adult weight, children between 6 and 16 years of age 50% and children under 6 receives no weight. The use of the number of members as measure of household size does not affect the conclusions.

conflict intensity - the so-called medium term. This section discusses the latter in light of the former.

Immediately after violence episodes, I showed that total income drops. Transfers in the form of remittances and pensions fall. Households reduce their work time in non-agricultural activities and register a sizeable loss of income paid on a regular basis. High castes experience a larger reduction of self-employed non-farm activities and income.

To address the immediate reduction of income, high caste households adopt different strategies than other households, a divergence which has consequences on post-war recovery trajectories. Both types of households react in the short-run by reducing their consumption expenditures, especially for non-food frequent expenditures like fuel, transport or schooling and for infrequent expenditures such as health or durable acquisition. Non-high castes also react by allocating more labour time in agriculture. It eventually generates additional income and dampens the short-term income contraction. High castes adopt a distinct strategy. They send productive males out of the household. It reduces their labour force but also their consumption needs. However, increased migration does not generate immediate returns in terms of remittances inflows. Instead, in the short-term, high castes register a larger fall of their total income.

Three years after the war ended, non-high caste households in conflict zones continue to allocate more work time in self-employed agricultural occupations. This contrasts with high castes who do not rely more on agriculture. While the "agricultural" strategy was beneficial for the non-high castes in the short-run, it does not translate in a higher agricultural income. Actually, agricultural income increases less in conflict zones affected by the conflict than elsewhere. This lower growth can be directly related to a rise in agricultural labour expenditures[35]. This reduction of agricultural income is true for both types of households but high castes have other strategies to avoid negative consequences on their living standards.

High castes rely more than others on migration. This trend has already been observed in the short term and remains after the peace agreement. This differential migration affects productive members and, while it was more important for men in the short-run, it is not gender specific in the medium term. It suggests that males are the first to leave - it is also riskier for them to stay - and females tend to depart later on. The relative reduction of household size among high castes pushes their income and consumption per capita upwards. The migration channel can also be interpreted as an income diversification strategy improving the safety net of staying household members. High caste rural households in conflict zones do not receive less remittances from people living in Nepal. One can argue that migration within the country is less risky than migration to foreign countries,

[35] Additional tables available upon request

even if the latter has higher returns, conditionally on success. Last but not least, high caste households retrieve jobs paid on a regular basis which contributes to a reduced volatility of their income[36].

For non-high caste households, the post-war situation looks gloomier. On average, their total remittances in-flow are not affected by the conflict. But, they receive less remittances from Nepal, which suggests a higher variance of inflows across households. Migration abroad is more uncertain than migration within the country, both for the migrant and for the potential recipient of remittances. Their larger reliance on agriculture in the short-term does not generate additional revenue. On the contrary, they face higher operational costs following the rise in agricultural labour expenditures, thereby reducing agricultural income.

The medium run analysis teaches us that the adverse effects of the conflict prove to be stronger and more persistent for non-high caste households. The relative labour intensification in agriculture has set non-high caste households on a path which, despite appearing beneficial in the short-run ends up being detrimental after conflict resolution. On the other hand, high castes lose more during the conflict but their short-term adaptation strategies help them to recover quickly once peace settles.

5.4 Robustness and validity of the strategy

The medium term strategy is subject to two main potential biases arising from sample selection related to the conflict and from potential threats to the validity of the instrument. Table A4 reports an analysis of household attrition in the third wave of the panel. The dependent variable is a dummy variable indicating whether a household surveyed in 2003 could not be surveyed again in 2010. The conflict never seems to increase attrition and the conclusion holds through in the two-step procedure. The size of households and livestock holdings are the most robust determinants of attrition. It is however unlikely to affect the conclusions of the previous analysis. Column (5-6) show that there is no differential attrition of small households in villages more severely affected by the conflict. The coefficient of household size is extremely stable when its interaction with conflict intensity is introduced in column (6).

The two-step procedure has particularly large effects when income is at play. Coefficients switch from a positive correlation between the conflict and the increase of total income and transfers to a negative effect of violence. This is consistent with a story where violence was more intense in areas where income was growing the most, and eventually where the differential growth rate of income was the largest between high castes and others. This is in line with the argument devel-

[36]Table for permanent jobs available upon request.

oped in Macours (2011). Notice also that the main concern with the exclusion restriction was that the price of imported timber would directly and positively affect household income. If so, then the instrument should reduce the negative effect of the conflict on income, which is clearly not the case here. The relation between agricultural self-employed labour and the conflict is also affected by the two-step procedure, even though the differential between high castes and others is very stable. It suggests that most of the casualties in the last years of the conflict were concentrated in areas where the agricultural transition was more advanced.

Last but not least, it should be clear that the analysis never claims to be exhaustive nor to reflect the total effect of the conflict on rural households. For instance, data are insufficient to shed light on psychological costs associated with the uncertainty of violence or of migration. Both identification strategies rely on variations in conflict intensity within Nepal. Yet, the civil war affected the whole country and there exists no perfect counter-factual, i.e. a peaceful Nepal over the same time span. It remains hard to analyse changes which have homogeneously affected the country such as overall migratory movement out of rural areas, the general under-provision of some public goods or the anticipated end of aid programs across the country. All discussions are based on variations over time and space in the number of killings within the same country.

6 Conclusion

I have confirmed and shown to what extent more intense episodes of violence during the People's War have, in the short-term, significantly reduce household income, particularly for high caste households, a declared target of the Maoists. The drop of income is driven by the reduction of revenue derived from non-agricultural activities and transfers. High castes lose more because their income generated by self-employed non-agricultural occupations sharply declines. In reaction to episodes of violence, productive males of the high castes leave their village while non-high caste households allocate more time to agricultural labour which slightly dampens their income loss.

Violence has large and immediate consequences on all rural households living around. In the short-term, everyone loses, and high castes even more, thereby reducing inequalities. In the medium term however, there is a reversal of fortune and distributional effects of the conflict go against non-high castes. High caste households recover faster by reshuffling their capital. Migration appears as a key mechanism in the capital re-composition. It is also striking to see that, even if migration abroad is highly profitable conditionally on success, rural high castes do not directly invest in this strategy following violence episodes. Migration within Nepal appears as a less risky strategy. For non-high castes, the short-term labour

intensification in agriculture is not sufficient to generate long term gains in this sector, often presented as key in rural development strategies.

Nepal emerges from the war but neither war nor peace has healed the country from its wounds. If inequalities were fuelling the conflict, it is not clear at all that the war has helped to reduce them. In the long-term, a fast convergence between income groups remain unlikely in Nepal, such as the ones described for Vietnam by Miguel and Roland (2011). Obviously, this paper cannot address nationwide policies such as political emancipation of formerly neglected ethnic groups or investment in infrastructure across the whole country. Hence, the current study highlights that violence cannot, on its own, create a more egalitarian society, even if it is the alleged goals of one of the parties at war. It might eventually redistribute political power, a potential tool to shape a new society. But from means to ends, there is a long way, many directions and up to now, little guidance by politicians in Nepal or researchers. What remains is a lot of uncertainty for citizens.

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Figure 1: Spatial distribution of killings during the People's War

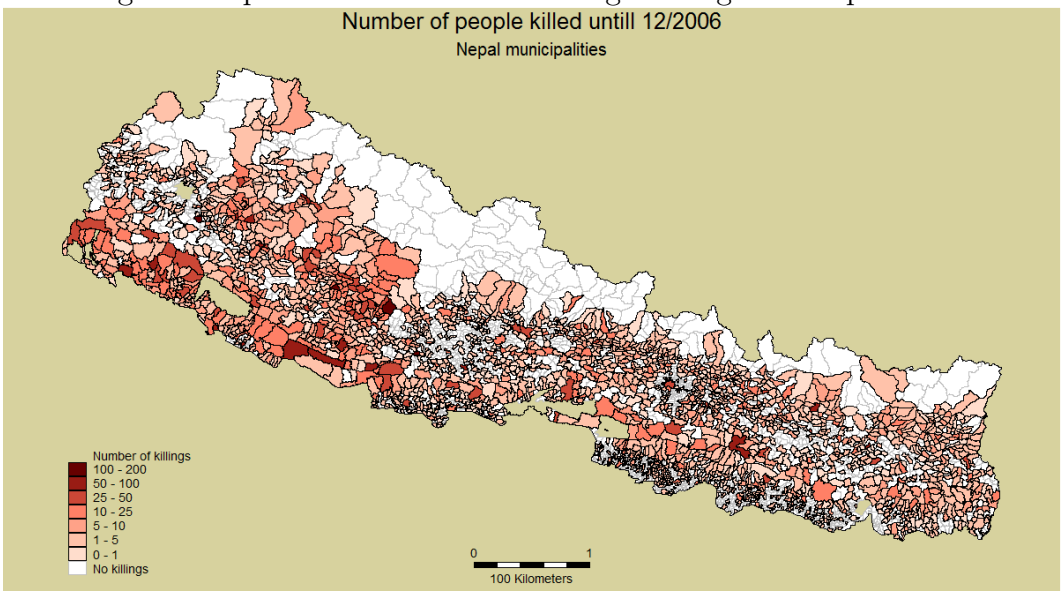

Figure 2: Spatial distribution of killings till December 2000

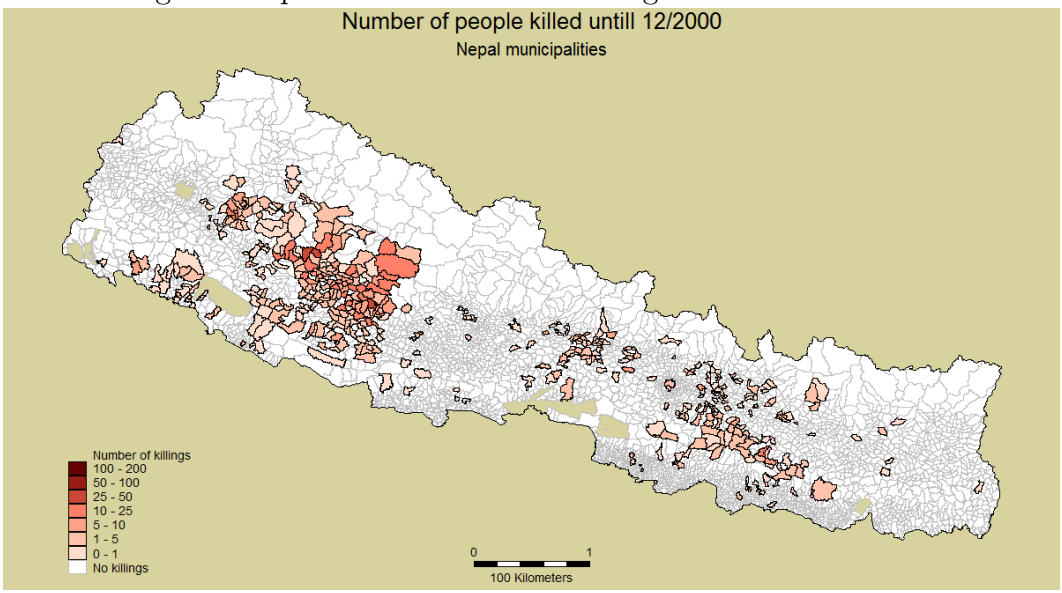

Figure 3: Number of people killed and of wards surveyed by month

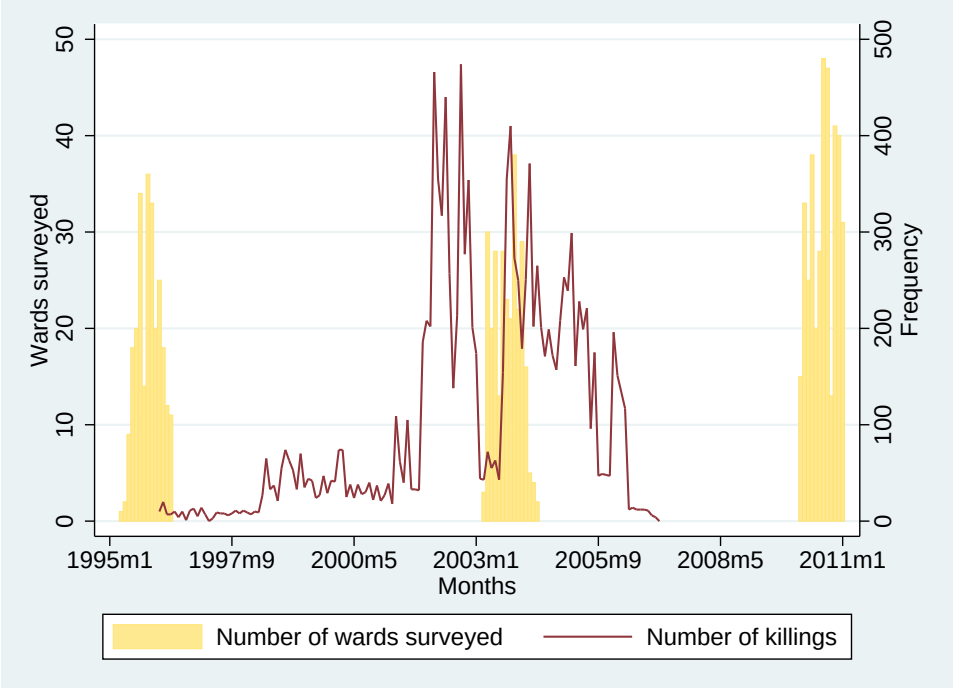

Figure 4: Spatial distribution of killings during NLSS2 and coverage of the survey

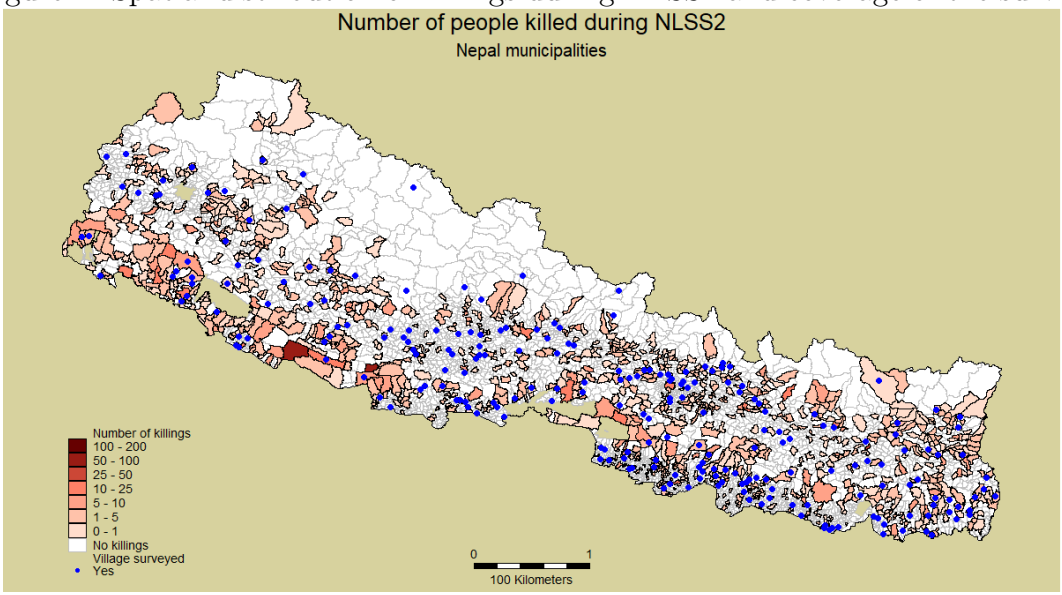

Figure 5: Distribution of demeaned killings before and after the survey month in each village, NLSS2

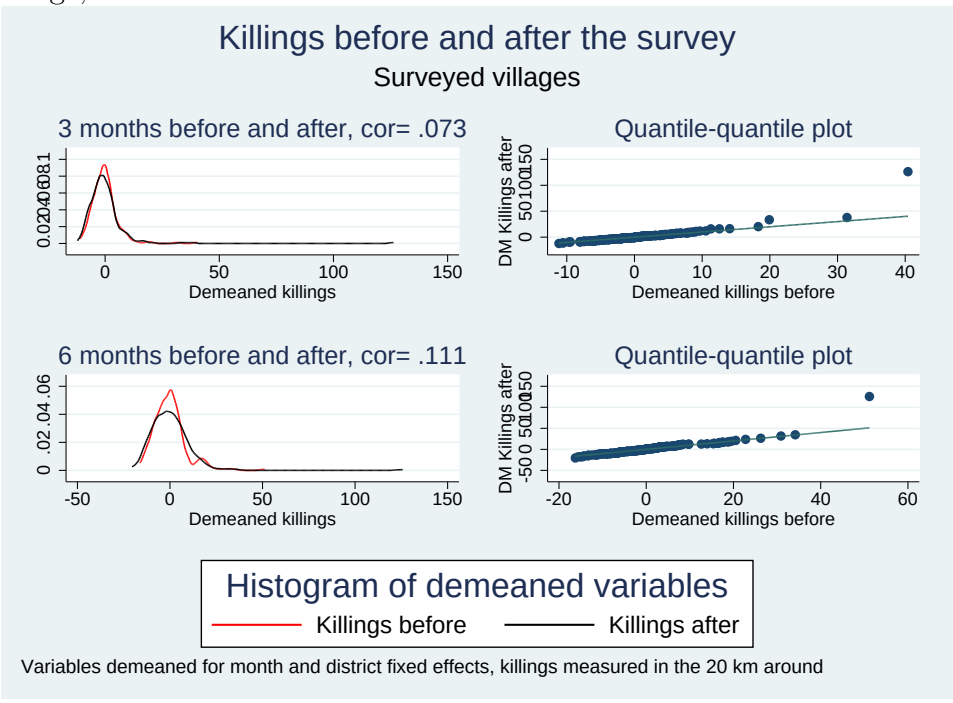

Figure 6: Average effect of the conflict on total income

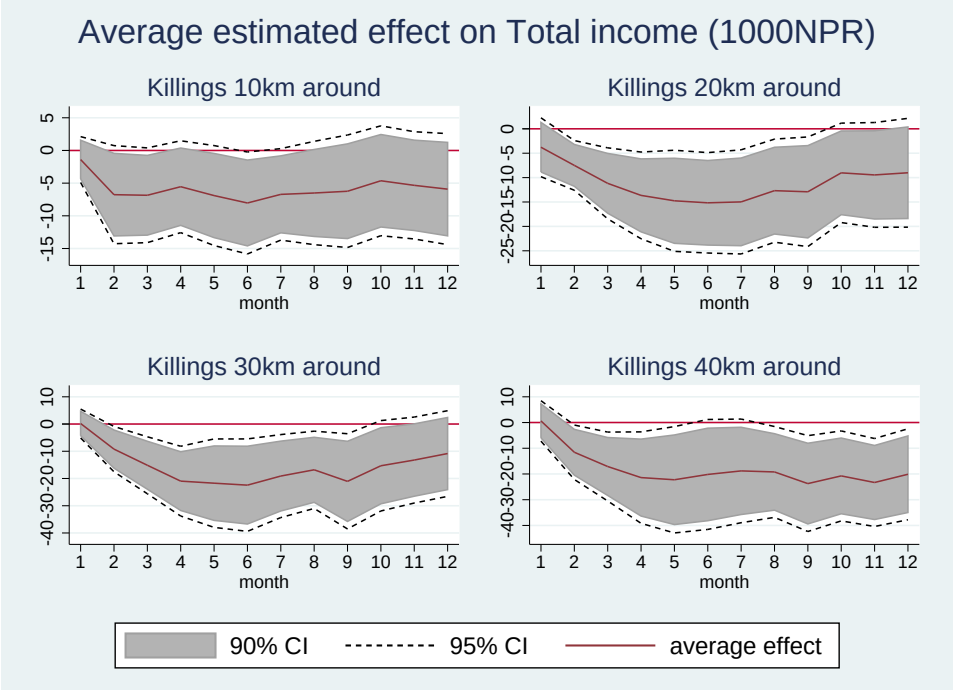

Figure 7: Average effect of the conflict on household size

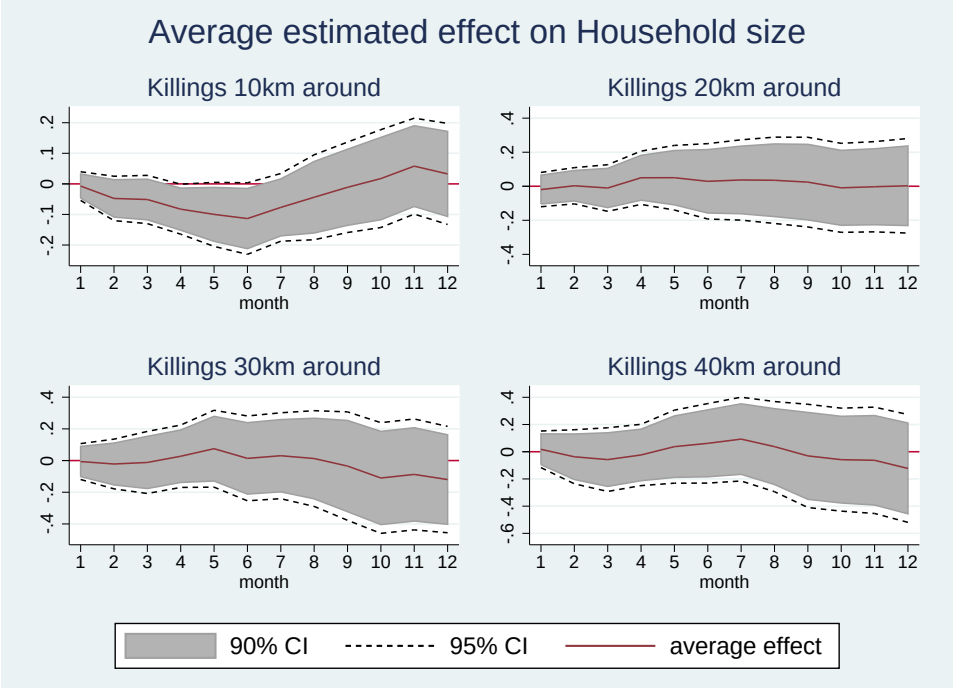

Figure 8: Average differential effect of the conflict on household size for high castes

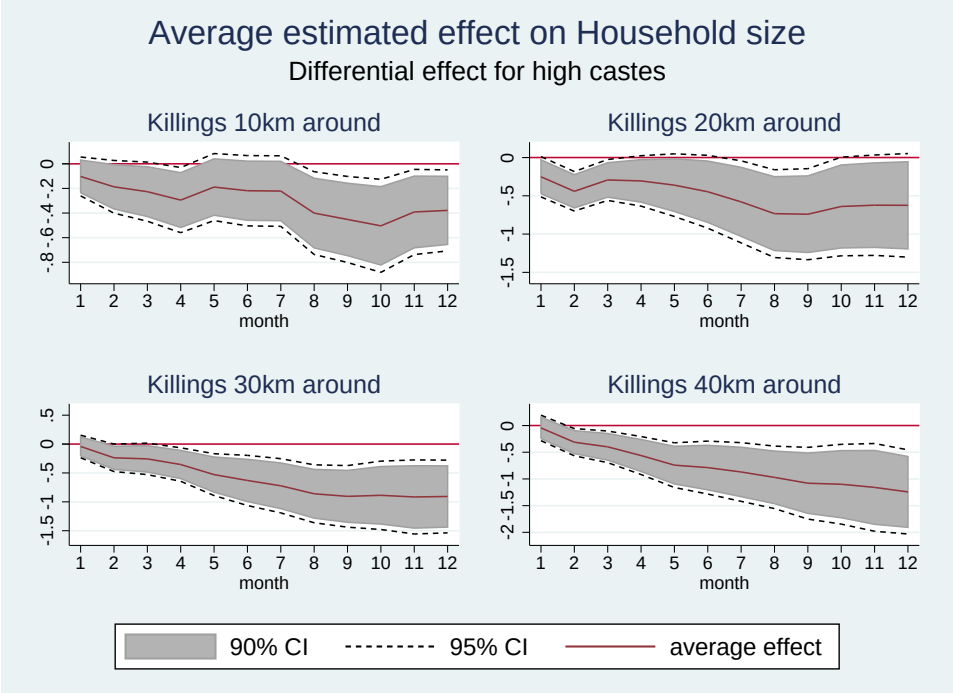

Table 1: Linear probability model of a sampled village enumeration month

	(1) 3 months	(2) 3 months	(3) 6 months	(4) 6 months	(5) 9 months	(6) 9 months
$Killings_{20km}^{[m-z;m-1]}$	-0.0005	-0.0005	-0.0002	-0.0002	-0.0003	-0.0003
	[-0.46]	[-0.45]	[-0.38]	[-0.36]	[-0.84]	[-0.85]
$Killings_{20km}^{[m-z;m-1+z]}$	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001
	[0.32]	[0.32]	[0.62]	[0.62]	[0.53]	[0.53]
$Killings_{20km}^{[onset;m-z-1]}$	-0.0000	-0.0000	-0.0000	-0.0000	0.0000	0.0000
	[-0.12]	[-0.20]	[-0.57]	[-0.66]	[0.51]	[0.46]
Belt-Zone F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Environment controls	No	Yes	No	Yes	No	Yes
Observations	2977	2977	2977	2977	2977	2977

Standard errors clustered at the VDC level, t-statistics in brackets $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Table 2: Income in war times in (NPR_{2010})

	Total income		Agri. labour inc.		Non-Agri. labour inc.		Transfers	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	-1265.4***	-1256.8***	163.5	305.8	-851.4***	-971.1***	-511.1**	-529.8*
	[-3.28]	[-2.89]	[0.90]	[1.61]	[-2.65]	[-2.76]	[-2.35]	[-1.97]
$Killings_{20km}^{[t-6;t+5]}$	347.2	341.3	-230.2**	-242.1**	288.5	295.1	298.5**	298.8**
	[1.60]	[1.60]	[-1.98]	[-2.13]	[1.43]	[1.47]	[2.21]	[2.17]
$Killings_{20km}^{[onset;t-7]}$	84.92	77.50	75.74**	60.45*	-82.26	-73.57	81.98**	82.39*
	[0.90]	[0.78]	[2.13]	[1.75]	[-1.26]	[-1.07]	[2.04]	[1.87]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dependant variable	104726.89		50471.61		30482.81		20107.35	
Average effect of killings	-15267.17	-15163.62			-10272.97	-11716.25	-6166.39	-6392.38

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table 3: Labour allocation in war times (Hours per year)

	Non-agri. wage labour		Non-agri. self-labour		Agri casual labour		Agri self-labour	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	-8.657**	-8.418*	-5.780	-9.593*	0.970	0.634	4.380	14.50
	[-2.04]	[-1.93]	[-1.22]	[-1.94]	[0.26]	[0.16]	[0.50]	[1.55]
$Killings_{20km}^{[t-6;t+5]}$	2.386	2.346	3.810	4.098	1.067	1.053	-1.778	-2.628
	[0.99]	[0.98]	[1.31]	[1.44]	[0.62]	[0.61]	[-0.37]	[-0.56]
$Killings_{20km}^{[onset;t-7]}$	1.024	0.973	-1.181	-0.808	-1.614***	-1.629***	1.735	0.640
	[1.30]	[1.20]	[-1.19]	[-0.85]	[-3.18]	[-3.09]	[0.67]	[0.26]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dependant variable	541.31		441.67		441.22		3358.66	
Average effect of killings	-104.45	-101.57	-115.74					

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table 4: Household consumption in war times (NPR_{2010})

	Tot. consumption		Freq. consumption		Food consumption		Household size	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	-1264.4***	-1344.3***	-447.1**	-444.5*	-33.93	-35.27	-0.000562	0.00241
	[-2.74]	[-2.78]	[-2.06]	[-1.91]	[-0.28]	[-0.27]	[-0.06]	[0.26]
$Killings_{20km}^{[t-6;t+5]}$	63.13	63.25	63.05	59.94	-44.53	-46.68	0.00206	0.00159
	[0.30]	[0.30]	[0.58]	[0.55]	[-0.71]	[-0.76]	[0.32]	[0.25]
$Killings_{20km}^{[onset;t-7]}$	189.7***	190.2***	80.68**	76.83**	32.57	29.92	-0.000721	-0.00131
	[2.63]	[2.64]	[2.36]	[2.19]	[1.43]	[1.28]	[-0.43]	[-0.82]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dependant variable	111565.98		85553.99		62977.44		5.34	
Average effect of killings	-15256.04	-16220.07	-5394.71	-5363.53				

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table 5: Income in war times (NPR_{2010}) - Heterogenous effect for Brahmin and Chhetry

	Total income		Agri. labour inc.		Non-Agri. labour inc.		Transfers	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	-910.0**	-982.4**	230.5	330.4	-671.1**	-816.3**	-415.5**	-443.4*
	[-2.44]	[-2.41]	[1.17]	[1.59]	[-2.23]	[-2.53]	[-2.07]	[-1.86]
$H.Caste * Killings_{20km}^{[t-6;t-1]}$	-2075.4*	-2109.6*	-542.6*	-532.2*	-1572.6*	-1603.7*	46.62	37.12
	[-1.88]	[-1.93]	[-1.73]	[-1.72]	[-1.86]	[-1.93]	[0.09]	[0.07]
$Killings_{20km}^{[t-6;t+5]}$	256.7	261.4	-190.3	-200.7	183.7	197.1	275.2**	277.4**
	[1.36]	[1.40]	[-1.44]	[-1.53]	[1.14]	[1.24]	[2.59]	[2.58]
$H.Caste * Killings_{20km}^{[t-6;t+5]}$	1067.3	1091.8	31.72	28.76	1116.2*	1133.8**	-140.0	-133.6
	[1.51]	[1.56]	[0.17]	[0.15]	[1.94]	[2.01]	[-0.45]	[-0.44]
$Killings_{20km}^{[onset;t-7]}$	60.62	60.83	78.77*	72.85*	-103.0	-96.80	88.38**	89.02*
	[0.59]	[0.57]	[1.80]	[1.69]	[-1.39]	[-1.26]	[2.02]	[1.95]
$H.Caste * Killings_{20km}^{[onset;t-7]}$	-141.0**	-136.5*	-41.71	-43.29	-54.40	-50.07	-52.91	-51.63
	[-1.99]	[-1.92]	[-1.23]	[-1.28]	[-1.11]	[-1.01]	[-1.43]	[-1.38]
High Caste	34854.3***	34111.4***	19229.8***	19105.3***	1752.9	1435.2	12960.8**	12789.3**
	[3.13]	[3.07]	[4.23]	[4.14]	[0.22]	[0.18]	[2.03]	[2.01]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interviewer fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dep. variable H.caste	117098.21***		54619.29***		35976.89**		21397.65	
Mean dep. variable others	99289.85000000001		48585.51		27984.44		19709.28	
Avg. effect of killings all	-10980.17	-11853.2			-8097.37	-9848.710000000001	-5013.32	-5349.52
Avg. effect of killings H.caste	-25040.99	-25453.48	-6546.75	-6421.150000000001	-18974.37	-19349.2		
Net effect on high caste	-36021.16	-37306.68			-27071.74	-29197.92		

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table 6: Men labour allocation in war times (Hours per year) - Heterogenous effect for Brahmin and Chhetry

	Agri. casual labour		Non-agri. casual labour		Agri self-labour		Non-agri self-labour	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	0.349	-0.0365	-4.162	-3.450	6.193	10.42**	-2.670	-5.438
	[0.13]	[-0.01]	[-1.63]	[-1.33]	[1.31]	[2.11]	[-0.70]	[-1.40]
$H.Caste * Killings_{20km}^{[t-6;t-1]}$	-6.062	-6.322	-0.556	-0.436	-15.63	-15.76	-16.85**	-16.70**
	[-1.57]	[-1.61]	[-0.14]	[-0.11]	[-1.30]	[-1.34]	[-2.39]	[-2.41]
$Killings_{20km}^{[t-6;t+5]}$	0.183	0.199	0.680	0.611	-2.038	-2.541	1.300	1.638
	[0.18]	[0.20]	[0.42]	[0.38]	[-0.79]	[-1.00]	[0.58]	[0.75]
$H.Caste * Killings_{20km}^{[t-6;t+5]}$	2.127	2.323	-1.372	-1.431	1.899	2.251	9.120*	8.833*
	[0.92]	[0.98]	[-0.49]	[-0.50]	[0.27]	[0.33]	[1.92]	[1.93]
$Killings_{20km}^{[onset;t-7]}$	-1.167***	-1.178***	1.799**	1.764**	0.665	0.328	-0.754	-0.522
	[-3.00]	[-2.96]	[2.48]	[2.43]	[0.47]	[0.24]	[-0.97]	[-0.70]
$H.Caste * Killings_{20km}^{[onset;t-7]}$	0.651*	0.685**	-1.213	-1.230	-1.555	-1.549	-0.372	-0.385
	[1.91]	[1.98]	[-1.47]	[-1.50]	[-1.15]	[-1.15]	[-0.50]	[-0.51]
High Caste	-146.9***	-153.2***	-57.31	-56.77	374.9**	351.8**	-61.55	-44.32
	[-3.43]	[-3.44]	[-0.90]	[-0.87]	[2.39]	[2.39]	[-0.66]	[-0.51]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interviewer fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dep. variable H.caste	60.85***		136.37***		1422.59**		266.54*	
Mean dep. variable others	315.65		296.92		1298.97		331.89	
Avg. effect of killings all						125.7		
Avg. effect of killings H.caste							-203.3	-201.46
Net effect on high caste	-68.93000000000001	-76.72					-235.51	-267.07

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table 7: Household structure in war times - Heterogenous effect for Brahmin and Chhetry

	Household size		Men 16-49		Women 16-49		Agri. labour exp.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	-0.000277	0.00354	-0.00453	-0.00392	-0.00143	-0.00131	-14.37	-21.74
	[-0.03]	[0.33]	[-0.97]	[-0.84]	[-0.46]	[-0.42]	[-0.47]	[-0.49]
$H.Caste * Killings_{20km}^{[t-6;t-1]}$	-0.0333	-0.0350	-0.0129*	-0.0127*	-0.00460	-0.00512	-143.6	-150.6*
	[-1.56]	[-1.65]	[-1.95]	[-1.92]	[-0.70]	[-0.79]	[-1.60]	[-1.69]
$Killings_{20km}^{[t-6;t+5]}$	-0.000308	-0.000942	0.00112	0.00107	-0.00145	-0.00152	13.85	13.94
	[-0.05]	[-0.14]	[0.41]	[0.39]	[-0.72]	[-0.76]	[0.99]	[0.94]
$H.Caste * Killings_{20km}^{[t-6;t+5]}$	0.00830	0.00998	0.00587*	0.00576	0.00346	0.00390	102.0	107.4
	[0.74]	[0.90]	[1.66]	[1.62]	[0.96]	[1.11]	[1.56]	[1.64]
$Killings_{20km}^{[onset;t-7]}$	0.00106	0.000504	0.000936	0.000916	0.00117**	0.00108**	-9.451	-9.961
	[0.52]	[0.24]	[1.29]	[1.26]	[2.18]	[2.02]	[-1.39]	[-1.37]
$H.Caste * Killings_{20km}^{[onset;t-7]}$	-0.00224	-0.00202	-0.00150*	-0.00152*	-0.000897	-0.000830	-2.539	-1.629
	[-0.99]	[-0.88]	[-1.75]	[-1.76]	[-1.50]	[-1.38]	[-0.59]	[-0.36]
High Caste	0.0431	-0.0285	0.0476	0.0501	0.0632	0.0463	244.1	59.60
	[0.17]	[-0.11]	[0.61]	[0.62]	[0.85]	[0.66]	[0.25]	[0.06]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interviewer fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dep. variable H.caste	5.04***		.98**		1.33**		2705.56*	
Mean dep. variable others	5.48		1.06		1.32		2509.93	
Avg. effect of killings all								
Avg. effect of killings H.caste			-.16	-.15				-1816.67
Net effect on high caste	-.41	-.38	-.21	-.2			-1906.08	-2078.93

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table 8: Annual number of killings in the 20km around surveyed VDCs between 2001 and 2006

	(1)	(2)	(3)	(4)
Lagged $Killings_{20km}$	0.00594	0.00375	-0.00424	-0.0209
	(0.10)	(0.06)	(-0.07)	(-0.36)
Indian timber price		-0.0410***	-0.0584***	-0.0528***
		(-2.99)	(-3.78)	(-3.25)
$\frac{\text{Indian timber price}}{\text{Distance to India}}$			0.624***	0.627***
			(4.17)	(4.02)
NDVI				-0.00609
				(-1.27)
Rainfall z-score				3.292**
				(2.27)
VDC fixed-effects	Yes	Yes	Yes	Yes
Year trend	Yes	Yes	Yes	Yes
Observations	450	450	450	450

Standard errors clustered at the village level

t-statistics in parentheses, $^{*}p < 0.1$,** $p < 0.05$,*** $p < 0.01$

Table 9: Agricultural labour and income

	Δ Agricultural self-labour				Δ Agricultural self-income			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Killings_{20km}^{[observed]}$	-3.978	-1.027			-36.42	-15.77		
	[-1.47]	[-0.37]			[-0.66]	[-0.30]		
$H.Caste * \Delta Killings_{20km}^{[observed]}$		-6.709**				-46.95		
		[-2.51]				[-1.31]		
$\Delta Killings_{20km}^{[predicted]}$			2.705	3.133**			-30.45	-24.77
			[1.62]	[2.11]			[-1.38]	[-1.01]
$H.Caste * \Delta Killings_{20km}^{[predicted]}$				-5.538*				-73.56
				[-1.70]				[-1.02]
Environment controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indian timber price	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region specific trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	744	744	744	744	744	744	744	744
Mean change dep. variable H.caste		−1708.47***				68.04**		
Mean change dep. variable others		-1069.48				2332.67		
Avg.effect of killings all				358.53				
Avg. effect of killings H.caste		-500.81		-633.86				
Net effect on high caste		-577.44						

Standards errors clustered at the village level. t-statistics in brackets, $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Village block-bootstrapped errors based on 500 replications of the two-step estimations.

The last lines of the table report average effect of casualties in the last conflict years for coefficient with $p - value \leq 0.10$

Table 10: Labour force and Household size

	Δ Work time				Δ Household size			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Killings_{20km}^{[observed]}$	-6.664	-3.309			0.00150	0.00439*		
	[-1.62]	[-0.78]			[0.61]	[1.72]		
$H.Caste * \Delta Killings_{20km}^{[observed]}$		-7.629**				-0.00657***		
		[-2.19]				[-4.15]		
$\Delta Killings_{20km}^{[predicted]}$			3.801*	4.246**			0.00137	0.00152
			[1.78]	[2.14]			[1.14]	[1.13]
$H.Caste * \Delta Killings_{20km}^{[predicted]}$				-5.764				-0.00192
				[-1.52]				[-0.62]
Environment controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indian timber price	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region specific trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	744	744	744	744	744	744	744	744
Mean change dep. variable H.caste		−1398.32***				−.63**		
Mean change dep. variable others		-502.47				-.12		
Avg.effect of killings all			435.02	485.96		.33		
Avg. effect of killings H.caste		-569.49				-.49		
Net effect on high caste		-816.47						

Standards errors clustered at the village level. t-statistics in brackets, $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Village block-bootstrapped errors based on 500 replications of the two-step estimations.

The last lines of the table report average effect of casualties in the last conflict years for coefficient with $p - value \leq 0.10$

Table 11: Transfers and remittances

	Δ Transfers				Δ Remittances from Nepal			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Killings_{20km}^{[observed]}$	83.80	59.74			12.11	-23.03		
	[1.14]	[0.66]			[0.42]	[-0.85]		
$H.Caste * \Delta Killings_{20km}^{[observed]}$		54.71				79.89**		
		[0.62]				[2.24]		
$\Delta Killings_{20km}^{[predicted]}$			-40.07	-45.79			-20.36**	-26.20***
			[-1.39]	[-1.64]			[-2.07]	[-2.59]
$H.Caste * \Delta Killings_{20km}^{[predicted]}$				74.12				75.67
				[0.94]				[1.41]
Environment controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indian timber price	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region specific trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	744	744	744	744	744	744	744	744
Mean change dep. variable H.caste		22583.18**				11039.53***		
Mean change dep. variable others		17662.54				2424.72		
Avg.effect of killings all							-2329.74	-2998.45
Avg. effect of killings H.caste						5963.59		
Net effect on high caste								

Standards errors clustered at the village level. t-statistics in brackets, $^{*}p < 0.1$,** $p < 0.05$,*** $p < 0.01$

Village block-bootstrapped errors based on 500 replications of the two-step estimations.

The last lines of the table report average effect of casualties in the last conflict years for coefficient with $p - value \leq 0.10$

Table 12: Total income and consumption per capita

	Δ Income per adj. capita				Δ Consumption per adj. capita			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Killings_{20km}^{[observed]}$	88.21	14.04			137.7	-4.648		
	[1.28]	[0.21]			[1.56]	[-0.06]		
$H.Caste * \Delta Killings_{20km}^{[observed]}$		168.6*				323.6***		
		[1.95]				[3.11]		
$\Delta Killings_{20km}^{[predicted]}$			-35.05	-45.11*			-43.72	-59.33
			[-1.33]	[-1.79]			[-1.00]	[-1.26]
$H.Caste * \Delta Killings_{20km}^{[predicted]}$				130.2				202.2
				[0.91]				[1.36]
Environment controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indian timber price	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region specific trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	744	744	1194	1194	744	744	1194	1194
Mean change dep. variable H.caste			29543.2**				47415.56***	
Mean change dep. variable others			18400.02				27558.62	
Avg.effect of killings all				-5162.83				
Avg. effect of killings H.caste		12586.24				24152.43		
Net effect on high caste		13634.47				23805.51		

Standards errors clustered at the village level. t-statistics in brackets, $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

Village block-bootstrapped errors based on 500 replications of the two-step estimations.

The last lines of the table report average effect of casualties in the last conflict years for coefficient with $p - value \leq 0.10$

A Appendix

Figure A1: Number of killings and villages surveyed in the first quarter of NLSS2

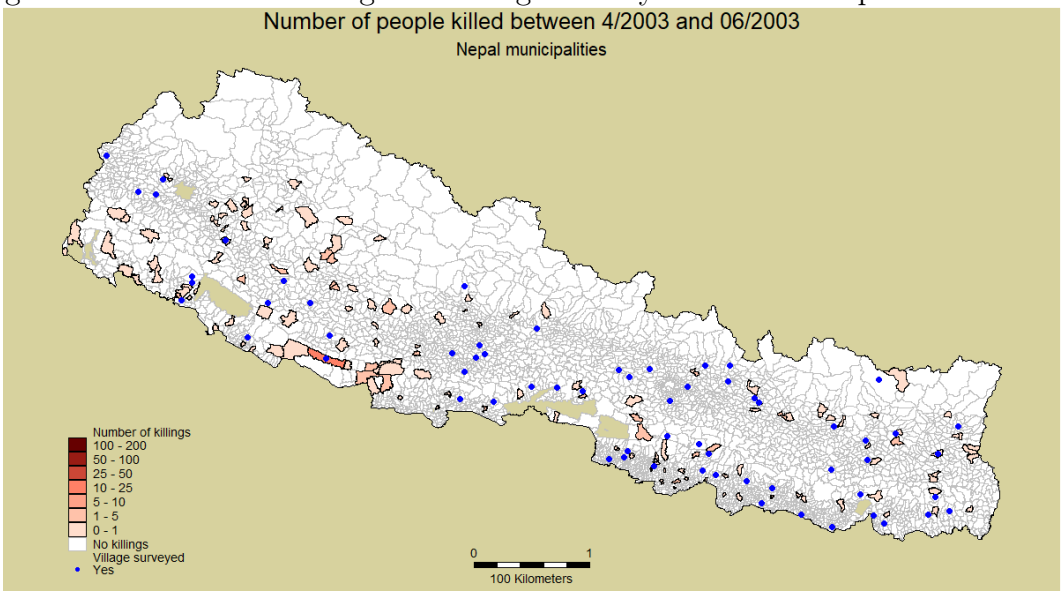

Figure A2: Number of killings and villages surveyed in the second quarter of NLSS2

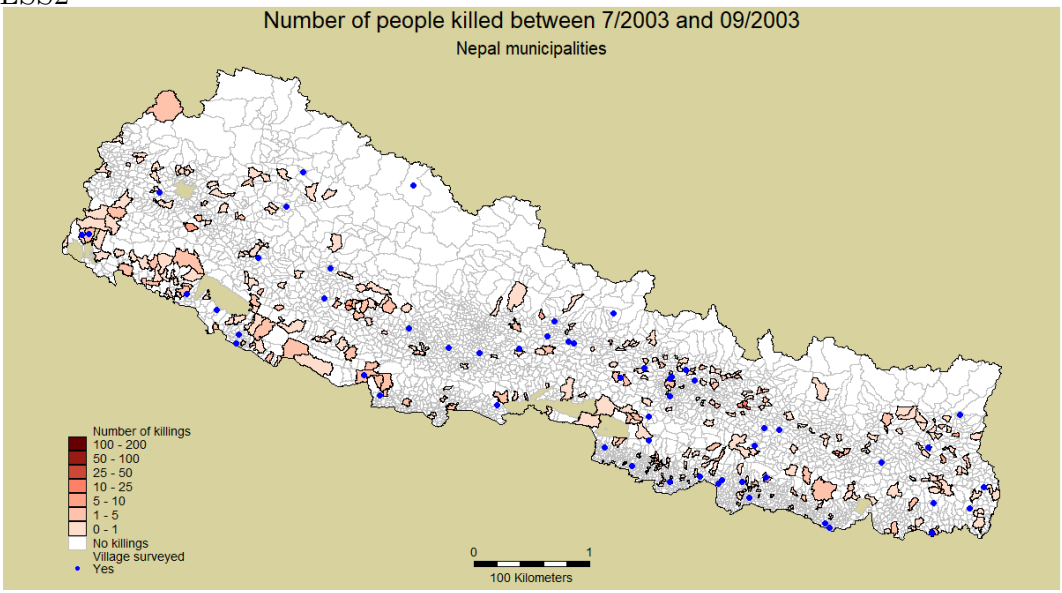

Figure A3: Number of killings and villages surveyed in the third quarter of NLSS2

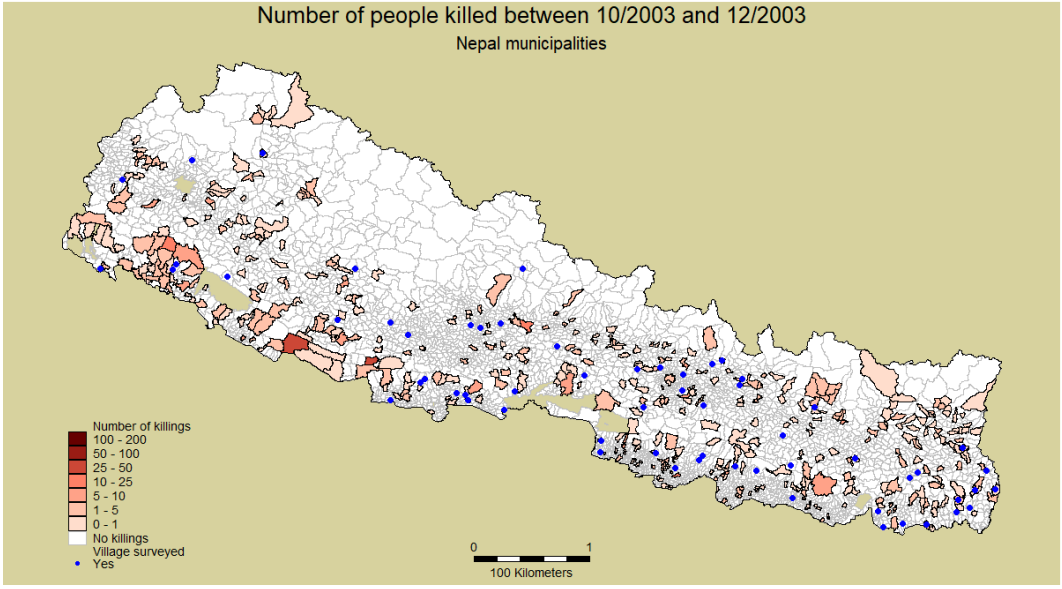

Figure A4: Number of killings and villages surveyed in the last four months of NLSS2

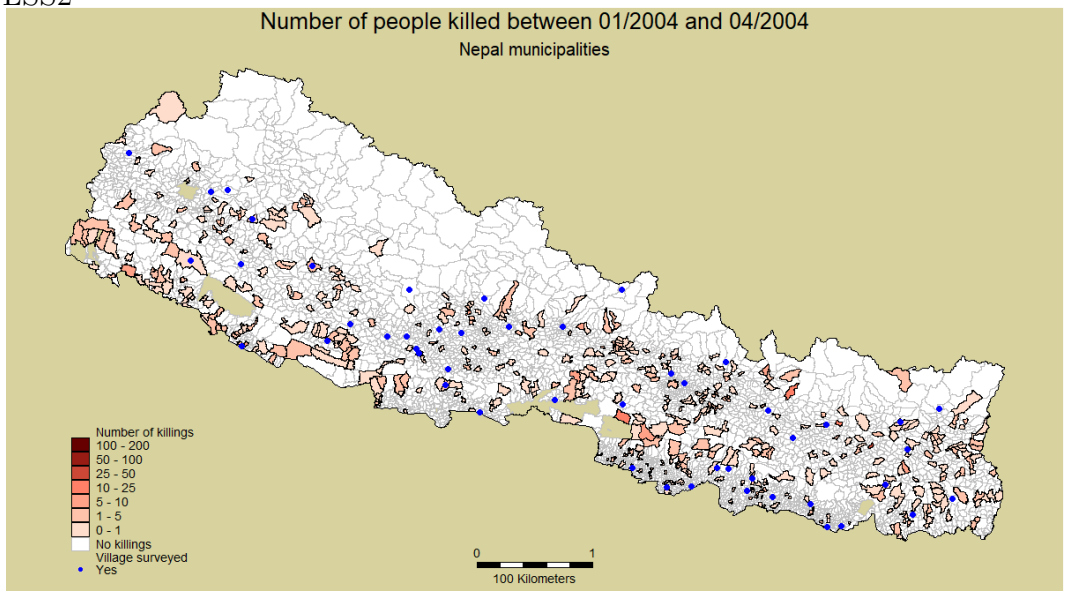

Figure A5: Surveyed rural villages in NLSS2, administrative zones and ecological belt of Nepal

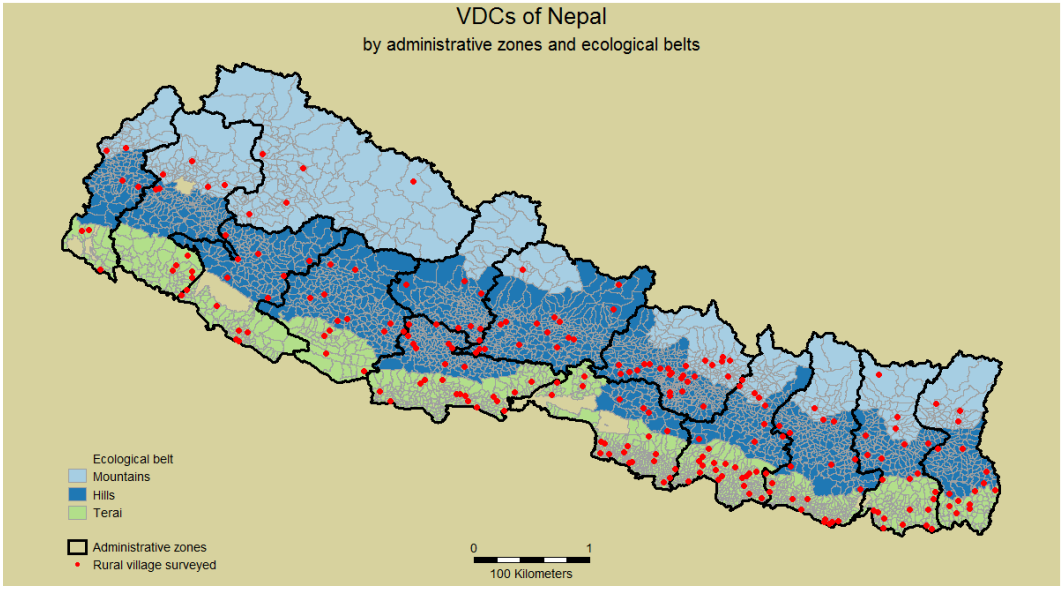

Figure A6: Evolution of imported timber price in India

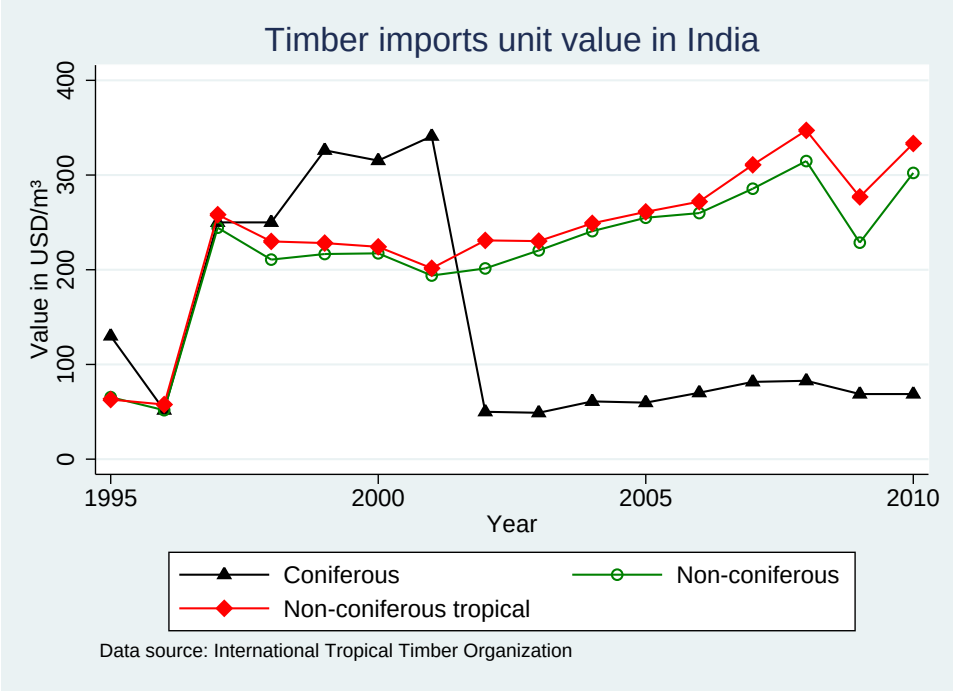

Figure A7: Average effect of the number of killings on the probability to survey a village in a given month

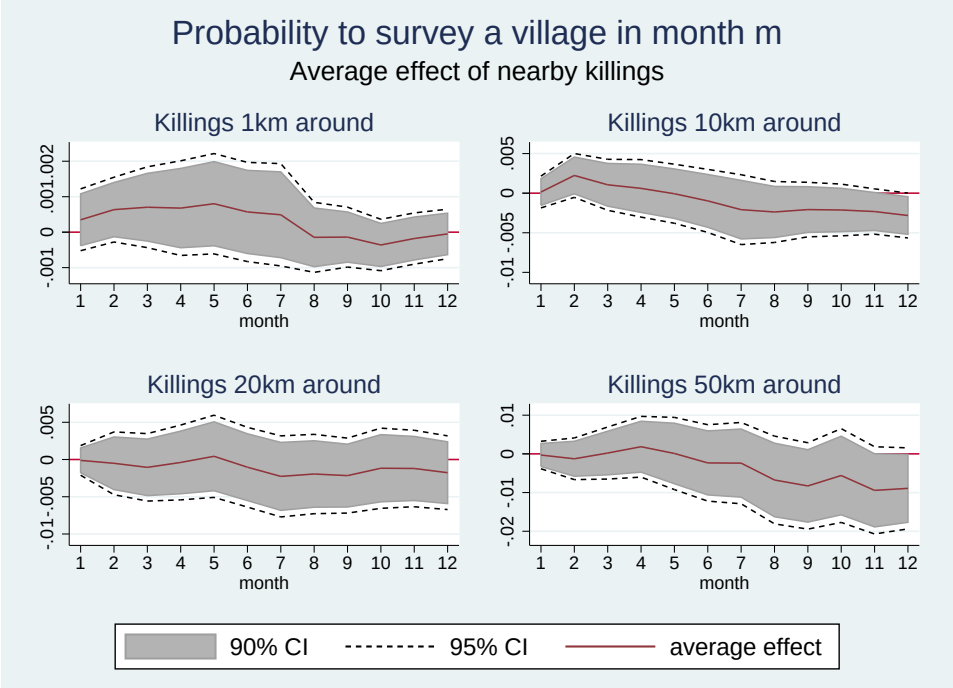

Table A1: Last 7 days men labour allocation in war times (Hours per week*52)

	Non-agri. wage labour		Non-agri. self-labour		Agri casual labour		Agri self-labour	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	-8.603*	-6.864	-7.460	-13.83**	2.083	2.275	9.625	19.69
	[-1.69]	[-1.30]	[-1.39]	[-2.48]	[0.37]	[0.40]	[0.73]	[1.32]
$Killings_{20km}^{[t-6;t+5]}$	2.686	2.597	4.489	5.023	-0.0388	-0.137	-1.896	-2.783
	[0.95]	[0.92]	[1.36]	[1.56]	[-0.01]	[-0.05]	[-0.27]	[-0.39]
$Killings_{20km}^{[onset;t-7]}$	1.951**	1.833*	-1.912	-1.224	-1.906**	-2.028**	1.780	0.640
	[2.10]	[1.91]	[-1.30]	[-0.96]	[-2.28]	[-2.37]	[0.48]	[0.19]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dependant variable	518.03		493.39		439.31		4068.91	
Average effect of killings	-103.8		-166.9					

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table A2: Last 7 days men labour allocation in war times (Hours per week*52)- Heterogenous effect for Brahmin and Chhetry

	Agri. casual labour		Non-agri. casual labour		Agri self-labour		Non-agri self-labour	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Killings_{20km}^{[t-6;t-1]}$	2.933	3.017	-5.101	-3.180	10.000	15.30**	-2.617	-7.942*
	[0.63]	[0.66]	[-1.23]	[-0.76]	[1.49]	[2.10]	[-0.62]	[-1.88]
$H.Caste * Killings_{20km}^{[t-6;t-1]}$	-7.009	-7.560	0.533	1.010	-25.44	-26.40*	-20.29**	-19.67**
	[-1.29]	[-1.38]	[0.10]	[0.18]	[-1.61]	[-1.74]	[-2.50]	[-2.53]
$Killings_{20km}^{[t-6;t+5]}$	-1.641	-1.711	1.765	1.595	-1.668	-2.388	0.921	1.607
	[-0.74]	[-0.78]	[0.69]	[0.63]	[-0.55]	[-0.79]	[0.39]	[0.72]
$H.Caste * Killings_{20km}^{[t-6;t+5]}$	3.405	3.871	-1.944	-2.233	2.263	3.369	11.63**	10.79**
	[1.16]	[1.30]	[-0.55]	[-0.61]	[0.25]	[0.40]	[2.08]	[2.21]
$Killings_{20km}^{[onset;t-7]}$	-1.687***	-1.777***	2.905**	2.834**	-0.168	-0.712	-1.816	-1.320
	[-2.83]	[-2.91]	[2.55]	[2.48]	[-0.09]	[-0.41]	[-1.61]	[-1.38]
$H.Caste * Killings_{20km}^{[onset;t-7]}$	1.251***	1.321***	-1.557	-1.623	-0.461	-0.351	0.349	0.282
	[3.06]	[3.20]	[-1.38]	[-1.43]	[-0.34]	[-0.26]	[0.39]	[0.32]
High Caste	-208.8***	-226.4***	-69.66	-63.40	379.8*	326.0*	-161.3	-117.8
	[-3.50]	[-3.69]	[-0.81]	[-0.71]	[1.82]	[1.75]	[-1.21]	[-1.18]
Environment controls	No	Yes	No	Yes	No	Yes	No	Yes
Belt-Zone fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interviewer fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2748	2748	2748	2748	2748	2748	2748	2748
Mean dep. variable H.caste	43.16***		130.88***		1685.25**		289.42*	
Mean dep. variable others	308.97		321.06		1576.38		365.27	
Avg. effect of killings all						184.62		-95.82000000000001
Avg. effect of killings H.caste						-318.48	-244.87	-237.31
Net effect on high caste							-276.45	-333.13

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

The last lines of the table report average effect of casualties in the last 6 months for coefficient with $p - value \leq 0.10$

Table A3: Household attrition in the panel between 1995 and 2003

Dep. variable: Dummy variable indicating that a panel household is not surveyed in 2003					
	(1)	(2)	(3)	(4)	(5)
$Killings_{20km}^{[t-6;t-1]}$	0.00155	0.00264	0.00342	-0.000841	-0.000432
	[0.77]	[1.39]	[1.51]	[-0.15]	[-0.08]
$Killings_{20km}^{[t-6;t+5]}$	-0.00127*	-0.00150**	-0.000894	-0.000280	-0.000581
	[-1.88]	[-2.33]	[-1.23]	[-0.17]	[-0.34]
$Killings_{20km}^{[onset;t-7]}$	0.000329	0.000289	0.000467	0.000926	0.000829
	[0.75]	[0.64]	[1.03]	[1.36]	[1.15]
High Caste		0.0621**	0.178***	0.194***	0.213***
		[2.20]	[3.39]	[3.67]	[4.17]
Tot. income$_{1995}$		-0.000164		-0.00130	-0.00150*
(1000NPR)		[-0.45]		[-1.52]	[-1.70]
Household size$_{1995}$		-0.0243***		-0.0213***	-0.0201***
		[-5.73]		[-3.22]	[-2.89]
Land owned$_{1995}$		0.00952			0.0192
(Hectares)		[1.26]			[1.36]
Big livestock$_{1995}$		-0.00712			-0.0114
		[-1.46]			[-1.22]
H.Caste$\star Killings_{20km}^{[t-6;t-1]}$			-0.00501**	-0.00483**	-0.00537**
			[-2.01]	[-2.05]	[-2.24]
H.Caste$\star Killings_{20km}^{[t-6;t+5]}$			-0.00108	-0.00133	-0.00120
			[-1.10]	[-1.35]	[-1.19]
H.Caste$\star Killings_{20km}^{[onset;t-7]}$			-0.000509	-0.000641	-0.000727
			[-1.00]	[-1.30]	[-1.47]
Belt-zone fixed effects	Yes	Yes	Yes	Yes	Yes
Killings$\star$Total income	No	No	No	Yes	Yes
Killings$\star$Household size	No	No	No	Yes	Yes
Killings$\star$Land owned	No	No	No	No	Yes
Killings$\star$Big livestock	No	No	No	No	Yes
Observations	920	920	920	920	920

Standard errors clustered at the village level t-statistics in brackets, $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Table A4: Household attrition in the panel between 2003 and 2010

	(1) OLS	(2) 2Step	(3) OLS	(4) 2Step	(5) OLS	(6) 2Step
$\Delta Killings_{20km}$	-0.000385	0.000208	-0.000478	0.000205	-0.00122	0.0000398
	[-0.86]	[0.87]	[-1.17]	[0.96]	[-1.64]	[0.09]
High Caste_{2003}			0.0160	0.00859	-0.0116	-0.00276
			[0.54]	[0.28]	[-0.19]	[-0.07]
$\text{Household size}_{2003}$			-0.0164***	-0.0169***	-0.0131	-0.0170**
			[-3.03]	[-2.95]	[-1.05]	[-2.54]
Total $\text{income (1000NPR)}_{2003}$			0.0000664	0.0000552	-0.0000997	-0.0000712
			[0.53]	[0.43]	[-0.38]	[-0.49]
$\text{Land owned (Ha)}_{2003}$			0.00144	0.00104		
			[0.16]	[0.12]		
$\text{Big livestock}_{2003}$			-0.0125**	-0.0113**		
			[-2.39]	[-2.07]		
ΔK_{20km} * H.Caste					0.000238	-0.000132
					[0.33]	[-0.21]
ΔK_{20km} * HH size					-0.0000123	0.0000270
					[-0.10]	[0.56]
ΔK_{20km} * Tot. inc.					0.000000816	0.000000580
					[0.29]	[0.43]
Delta Timber price	Yes	Yes	Yes	Yes	Yes	Yes
Distance to India	Yes	Yes	Yes	Yes	Yes	Yes
Δ Environment controls	Yes	Yes	Yes	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	843	843	843	843	843	843

Standard errors clustered at the village level, t-statistics in brackets, $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

In even columns, village block-bootstrapped errors based on 500 replications of the two-step estimations.

Table A5: Orthogonality between the instrument and pre-conflict outcomes

	(1) Income	(2) Consumpt°	(3) Hh. size	(4) NAgri. self-inc.	(5) Cas. labor inc.	(6) NAgri. self-labor	(7) NAgri. cas. labor
$\frac{\text{Indian timber price}}{\text{Distance to India}}$	-130.8	-215.6	-0.00312	-72.68	177.1	-0.807	0.904
	[-0.45]	[-1.12]	[-0.47]	[-0.56]	[1.19]	[-0.18]	[0.58]
Distance to India	-258.6***	-156.1***	-0.0104***	-12.88	-46.15	-1.642	1.371**
	[-3.18]	[-3.09]	[-4.29]	[-0.27]	[-1.44]	[-1.60]	[2.07]
Indian timber price	-111.5	4.271	-0.00158	-65.30	-15.00	-0.625	-0.686
	[-0.99]	[0.07]	[-0.59]	[-0.83]	[-0.44]	[-0.54]	[-0.85]
Region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2559	2559	2559	2559	2559	2559	2559

Standard errors clustered at the village level, t-statistics in parentheses, $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Table A6: Number of males and productive females in the household

	Δ Number of males				Δ Number of women aged 15-49			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Killings_{20km}^{[observed]}$	-0.00151	-0.000312			0.000537	0.00153		
	[-1.13]	[-0.19]			[0.46]	[1.08]		
$H.Caste * \Delta Killings_{20km}^{[observed]}$		-0.00273**				-0.00227***		
		[-2.57]				[-2.75]		
$\Delta Killings_{20km}^{[predicted]}$			0.00108	0.00119			0.000538	0.000666
			[1.29]	[1.28]			[0.99]	[1.25]
$H.Caste * \Delta Killings_{20km}^{[predicted]}$				-0.00147				-0.00165
				[-0.74]				[-1.45]
Environment controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indian timber price	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region specific trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	744	744	744	744	744	744	744	744
Mean change dep. variable H.caste		−.35**				−.18***		
Mean change dep. variable others		-.07				.04		
Avg.effect of killings all			.12					
Avg. effect of killings H.caste		-.2				-.17		-.19
Net effect on high caste		-.23						

Standards errors clustered at the village level. t-statistics in brackets, $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

Village block-bootstrapped errors based on 500 replications of the two-step estimations.

The last lines of the table report average effect of casualties in the last conflict years for coefficient with $p - value \leq 0.10$

Table A7: Descriptive statistics: household level variables

Variable	1996			2003			2010	
	Mean	Median		Mean	Median		Mean	Median
Total income	84746.90	63767.3	***	104726.89	76233.34	***	178014.46	112583.7
	(107672.32)			(111557.83)			(308770.77)	
High Caste	.35	0	***	.31	0	***	.33	0
	(.48)			(.46)			(.47)	
Agri. labour inc.	53798.16	41459.76	**	50471.61	41476.32	***	54912.08	39906.89
	(54355.36)			(44544.48)			(79089.97)	
Agri. self-inc.	31895.02	21143.36	***	28471.36	19927.88	***	32467.15	21447.4
	(39729.44)			(33874.94)			(68309.95)	
Non-Agri. labour inc.	23290.17	0	***	30482.81	4459.40	***	70689.91	15373.95
	(81411.39)			(77693.01)			(232601.95)	
Transfers	5822.49	0	***	20107.35	0	***	48165.57	1968.16
	(38234.13)			(62634.25)			(180229.66)	
Remittances received	8183.56	0	***	17366.54	0	***	44710.97	1668.22
	(47651.97)			(60133.53)			(173041.81)	
Remittances from Nepal	3707.03	0	***	4053.82	0	***	8154.66	0
	(30446.39)			(20723.91)			(33189.82)	
Remittances from Abroad	4476.53	0	***	13312.71	0	***	36556.31	0
	(36730.44)			(56880.23)			(169939.89)	
Remittances sent	1452.23	0	***	3513.62	0	***	37567.67	0
	(10523.54)			(65777.51)			(1860099.7)	
Household size	5.68	5	***	5.34	5	***	5	5
	(2.81)			(2.58)			(2.42)	
Men 16-49	1.16	1	***	1.04	1	***	.9	1
	(.91)			(.89)			(.85)	
Women 16-49	1.34	1	***	1.33	1	***	1.3	1
	(.85)			(.87)			(.84)	
Total Consumption	90868.19	71424.77	***	111565.98	83142.72	***	230202.31	158611.13
	(97864.25)			(119618.55)			(282305.69)	
Frequent Consumption	72687.67	63506.07	***	85553.99	70852.83	***	130641.27	112851.66
	(47155.7)			(61128.02)			(80764.13)	
Food cons.	58167.04	50768.8	***	62977.44	55489.61	***	92560.31	82405.77
	(37125.99)			(35823.89)			(49889.85)	
Work time	4908.3	4248	***	4794.22	4314	***	3703.54	3209.5
	(3369.47)			(2945.79)			(2735.41)	
Work time: agri. casual labour	681.51	0	***	441.22	0	***	274.79	0
	(1349.62)			(940.05)			(753.82)	
Work time: Non-agri. casual labour	295.09	0	***	279.35	0	***	380.28	0
	(665.52)			(676.29)			(883.05)	
Work time: agri. self-labour	3339.47	2680	***	3358.66	2873.5	***	1956.76	1500
	(3174.79)			(2698.13)			(1985.63)	
Work time: Non-agri. self-labour	370.04	0	**	441.67	0	***	686.56	0
	(1183.38)			(1211.06)			(1679.69)	
Work time: Permanent labour	221.25	0	**	273.32	0	***	405.16	0
	(786.36)			(811.96)			(1075.88)	
Observations	2657			2748			3900	

Descriptive statistics for the three repeated cross-sections of NLSS in rural villages. All monetary values expressed in NPR2010

Standard errors in parentheses – $^{*}p < 0.10$,** $p < 0.05$,*** $p < 0.01$ for difference in means between waves

Table A8: Descriptive statistics: household level variables for Brahmin and Chhetry

Variable	1996			2003			2010	
	Mean	Median		Mean	Median		Mean	Median
Total income	83886.40	60138.41	***	117062.23	83321.44	***	199137.23	120155.94
	(94609.46)			(140472.58)			(323135.54)	
Agri. labour inc.	52588.46	36817.43	***	54619.29	46147.44	***	59705.6	43800.29
	(64673.21)			(44422.25)			(94323.07)	
Agri. self-inc.	34055	22877.47	***	29234.62	24050.36	***	33581.95	22656.67
	(42579.17)			(26993.97)			(83186.87)	
Non-Agri. labour inc.	21717.98	0	***	35976.89	0	***	80806.33	6930.14
	(50277.37)			(115813.93)			(264633.19)	
Transfers	6806.1	0	***	21361.66	0	***	53112.57	4232.05
	(30993.51)			(59301.02)			(152203.65)	
Remittances received	10610.06	0	***	19185	0	***	47255.26	3157.76
	(54201.61)			(58552.5)			(131676.83)	
Remittances from Nepal	5636.11	0	***	6254.94	0	***	10757.86	0
	(46028.86)			(31446.63)			(33073.25)	
Remittances from Abroad	4973.95	0	***	12930.06	0	***	36497.41	0
	(29559.15)			(49760.56)			(127986.4)	
Remittances sent	1942.65	0	***	6408.65	0	***	100566.32	0
	(11703.43)			(115407.96)			(3261707.29)	
Household size	5.60	5	***	5.04	5	***	4.71	4
	(2.56)			(2.07)			(2.16)	
Men 16-49	1.1	1	***	.98	1	***	.84	1
	(.87)			(.83)			(.82)	
Women 16-49	1.37	1	***	1.33	1	**	1.25	1
	(.86)			(.79)			(.8)	
Total Consumption	99421.07	74045.22	***	132004.78	95147.72	***	269678.31	181214.66
	(128634.37)			(167666.02)			(346167.25)	
Frequent Consumption	74576.38	65370.99	***	93870.16	78110.44	***	137558.74	119474.64
	(50644.84)			(68679.51)			(84669.01)	
Food cons.	57568.18	49403.01	***	66758.91	60015.89	***	94858.21	85767.69
	(39594.48)			(33856.54)			(49663.8)	
Work time	5067.05	4320	*	4782.32	4452	***	3354.4	2880
	(3419.26)			(2793)			(2571.82)	
Work time: agri. casual labour	236.91	0	***	112.72	0	**	79.03	0
	(714.86)			(360.44)			(329.16)	
Work time: Non-agri. casual labour	235.73	0	***	153.37	0	***	219.21	0
	(596.51)			(462.66)			(595.5)	
Work time: agri. self-labour	4048.03	3532	**	3749.83	3330	***	1928.92	1536
	(3249.81)			(2559.87)			(1843.56)	
Work time: Non-agri. self-labour	270.4	0	**	383.03	0	***	614.34	0
	(971.1)			(1235.87)			(1608.86)	
Work time: Permanent labour	275.47	0	***	383.37	0	***	512.9	0
	(786.09)			(950.29)			(1164.46)	
Observations	935			859			1268	

Descriptive statistics for the three repeated cross-sections of NLSS in rural villages. All monetary values expressed in NPR2010

Standard errors in parentheses – $^{*}p < 0.10$,$^{**}p < 0.05$,$^{***}p < 0.01$ for difference in means between waves

Table A9: Descriptive statistics: household level variables for non-high castes

Variable	1996			2003			2010	
	Mean	Median		Mean	Median		Mean	Median
Total income	85214.12	65471.27	***	99117.54	73145.13	***	167834.43	109953.95
	(114164.28)			(95075.12)			(301137.73)	
Agri. labour inc.	54454.99	43669.46	***	48585.51	39415.03	**	52602.74	38487.62
	(47838.12)			(44483.9)			(70491.69)	
Agri. self-inc.	30722.2	20115.89	**	28124.28	18357.86	**	31930.09	20106.7
	(38054.42)			(36579.7)			(59847.96)	
Non-Agri. labour inc.	24143.82	2662.62	**	27984.44	7541.69	***	65816.19	18147.07
	(94099.39)			(51644.01)			(215362.99)	
Transfers	5288.42	0	***	19536.96	0	***	45782.29	1371.19
	(41640.36)			(64099.86)			(192260.87)	
Remittances received	6866.04	0	***	16539.61	0	***	43484.76	1236.76
	(43646.89)			(60836.2)			(189796)	
Remittances from Nepal	2659.59	0	***	3052.89	0	***	6900.06	0
	(16663.48)			(13125.46)			(33179.24)	
Remittances from Abroad	4206.44	0	***	13486.72	0	***	36584.7	0
	(40096.07)			(59849.95)			(186847.39)	
Remittances sent	1185.94	0	**	2196.45	0	***	7217.26	0
	(9817.07)			(15320.12)			(37465.41)	
Household size	5.72	5	***	5.48	5	***	5.14	5
	(2.94)			(2.77)			(2.52)	
Men 16-49	1.2	1	***	1.06	1	***	.93	1
	(.92)			(.91)			(.86)	
Women 16-49	1.32	1	***	1.32	1	***	1.32	1
	(.84)			(.9)			(.86)	
Total Consumption	86224.21	69731.03	***	102271.68	78394.85	***	211184.24	149024.38
	(75758.26)			(88129.36)			(243487.48)	
Frequent Consumption	71662.15	62464.58	***	81772.31	67200.78	***	127308.69	109671.23
	(45130.56)			(56985.7)			(78613.36)	
Food cons.	58492.2	51564.51	**	61257.87	53720.02	***	91453.26	80052.23
	(35721.97)			(36563.16)			(49970.08)	
Work time	4822.1	4165	**	4799.63	4244	***	3871.75	3360
	(3339.96)			(3013.41)			(2795.78)	
Work time: agri. casual labour	922.92	0	***	590.6	0	***	369.1	0
	(1538.84)			(1074.85)			(873.25)	
Work time: Non-agri. casual labour	327.32	0	***	336.63	0	***	457.87	0
	(698.20)			(746.77)			(983)	
Work time: agri. self-labour	2954.75	2270	**	3180.78	2640	***	1970.18	1500
	(3066.38)			(2740.95)			(2050.78)	
Work time: Non-agri. self-labour	424.13	0	**	468.33	0	***	721.35	0
	(1281.06)			(1198.99)			(1711.98)	
Work time: Permanent labour	191.81	0	**	223.28	0	***	353.25	0
	(785.17)			(735.42)			(1026.7)	
Observations	1722			1889			2632	

Descriptive statistics for the three repeated cross-sections of NLSS in rural villages. All monetary values expressed in NPR2010

Standard errors in parentheses – $^{*}p < 0.10$,$^{**}p < 0.05$,$^{***}p < 0.01$ for difference in means between waves

Table A10: Descriptive statistics: village level variables

Variable	1996			2003			2010	
	Mean	Median		Mean	Median		Mean	Median
$Killings_{20km}^{[t-6;t-1]}$	.04	0	***	12.03	8	***	0	0
	(.25)			(12.72)			(0)	
$Killings_{20km}^{[t-6;t+5]}$	.23	0	***	30.28	25	***	0	0
	(1.12)			(21.82)			(0)	
$Killings_{20km}^{[onset;t-7]}$	.07	0	***	58.82	43	***	146.22	129
	(.25)			(59.97)			(85.68)	
Wood price (USD)	69.59	62.98	***	200.27	230.25	***	289.25	333.35
	(23.85)			(67.97)			(87.32)	
Distance to India (km)	49.98	50.77	***	47.53	45.06	***	46.72	43.33
	(37.03)			(37.07)			(35.19)	
NDVI× 100			***	82.68	84.16	***	83.04	83.75
				(6.55)			(6.01)	
Rain anomalies (z-score)			***	.46	.55	***	-.74	-.77
				(.69)			(.72)	
Observations	215			229			325	

Descriptive statistics for the three repeated cross-sections of NLSS in rural villages. All monetary values expressed in NPR2010
Standard deviation in parentheses – $^{*}p < 0.10$,$^{**}p < 0.05$,$^{***}p < 0.01$ for difference in means between waves