

Research Statement

ANOUK S. RIGTERINK, UNIVERSITY OF OXFORD

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I study topics relating to development, conflict and security, and natural resources and the environment.

In my work, I find innovative ways to study whether policies work in situations of violent conflict. For example, US counterterrorism policy increasingly focusses on targeting leaders of terrorist groups: my research compares ‘successful’ and ‘failed’ drone strikes on terrorist leaders to suggest that these policies can backfire. The Kimberley Process attempts to counter violence by driving the price of ‘conflict diamonds’ down to zero: my research investigates the relationship between the diamond price and violence, and finds a way to identify potential diamond-producing areas in conflict zones using geology. I consider my ability to identify such pertinent questions, as well as innovative ways to answer these, as one of my core strengths.

I have gained experience with a variety of research methods, including natural experiments (illustrated above), randomized controlled trials (RCTs) and lab-in-the-field experiments. I’m currently joint PI on an RCT investigating whether community monitoring can decrease deforestation in Uganda, and have co-designed a lab-in-the-field experiment investigating how recalling experience of violent conflict affects the deep determinants of behaviour. I have done six months of fieldwork in South Sudan and Uganda.

This research statement will provide more detail on each of these projects and set out my research agenda for the future.

Current research

Drone strikes and control within terrorist organizations

For my job market paper, I investigate how undermining a terrorist group’s structure of internal organization affects terrorist violence. To identify this effect, I construct a unique dataset of successful and failed strikes by unmanned aerial vehicles (drones) on terrorist leaders. Exploiting the natural experiment posed by drone ‘hits’ and ‘misses’, I conclude that drone strikes killing a terrorist leader increase terrorist attacks, by aggravating problems of control within (networks of) terrorist groups.

The effect of targeting terrorist leaders, and thereby undermining a terrorist group’s internal organization, is theoretically ambiguous. If we model a terrorist group as unitary, removing a terrorist leader diminishes the group’s capacity and the number of attacks it commits. But if we consider that terrorist groups are subject to collective action and principal-agent problems (problems of control), the predictions are less straightforward. If terrorist operatives have a greater preference for (indiscriminate) violence than the leader, or if weaker terrorist networks decrease the opportunities to free-ride, killing a terrorist leader may lead to *more* terrorist attacks.

Improving on existing literature, I create a dataset that enables me to credibly identify the causal effect of killing a terrorist leader. Studying the effect of counterterrorism policies is empirically challenging: although terrorist groups may change their behaviour in response to counterterrorism, it is equally possible that counterterrorism efforts are driven by terrorist group activity. Therefore, I construct a unique dataset including successful and failed drone strikes on terrorist leaders in Pakistan, which contains variation both across groups and over time. I show that ‘hits’ and ‘misses’ are quasi-random.

Comparing changes in the number of terrorist attacks by a terrorist group before and after a drone

strike hit their leader, to changes before and after a miss, I conclude that a drone hit is associated with an *increase* in terrorist activity by 29 attacks over six months globally.

After considering a wide range of theoretical explanations, I conclude that this result is best explained by aggravated problems of control within terrorist groups. Existing studies of targeted leader killing commonly ignore strategic interactions between terrorist leaders and operatives, or within terrorist networks. By contrast, I find evidence that my results are driven by diminished control of terrorist leaders over operatives and splits within terrorist groups and networks.

As such, my job market paper provides empirical evidence that problems of control within terrorist organizations matter, and that counterterrorism policies ignoring these may backfire. This is both academically relevant – it pays to model terrorist organizations as non-unitary – as well as policy-relevant – given that targeting terrorist leaders has become an increasingly common US counterterrorism policy.

Diamonds: a rebel’s or a farmer’s best friend?

This paper (currently revise and resubmit with the *Journal of Conflict Resolution*) investigates so-called ‘conflict diamonds’, providing an exogenous and more reliable measure of where these might be found based on geology, and a theoretical model which captures geography and two contradictory effects of diamonds on violent conflict.

Diamonds which are ‘lootable’ and have a labour-intensive production process are routinely considered as a cause of violent conflict, or ‘a rebel’s best friend’. Qualitative studies however, point out that these diamonds also provide an income to many households in Sub-Saharan Africa. In this sense, diamonds may be ‘a farmer’s best friend’, and help decrease violence, if better livelihoods translate into higher costs of rebel recruitment.

My paper provides a formal theoretical model of these two effects, the looting and the income effect. Unlike existing theoretical models, this model includes geography, which enables me to derive predictions at different levels of analysis, the local level and the country level.

Studying these effects empirically is hampered by a lack of data and endogeneity: artisanal mining is notoriously difficult to record and may increase in response to rather than as a result of conflict. To overcome this problem, I construct a new measure, which estimates the propensity of an area to hold diamonds based on its geological characteristics.

Using this measure, I conclude that an increase in the diamond price is associated with a concentration of violence in areas with lootable, labour-intensive diamonds, but that this effect is dominated by an income effect at the country level. As such, this paper encompasses the looting and income effect in a single theory, and reconciles contradictory results at different levels of analysis obtained by prior empirical studies on natural resources and violence.

This conclusion has important implications for the Kimberley Process, which imposes embargoes on trade in diamonds from countries experiencing violent conflict. My results suggest that such embargoes may indeed decrease violence related to looting, but that these also hurt livelihoods, thereby making the population more vulnerable to rebel recruitment.

Ongoing research

Community monitoring and deforestation

With Chaning Jang and Sabrina Eisenbarth, I am principal investigator of an RCT in progress on community monitoring and deforestation in Uganda. We obtained a \$235,000 grant for this from Evidence in Politics and Governance (EGAP) Metaketa III. In addition to any publications following from this, we will be co-authors on the Metaketa III meta-analysis.

Work by Elinor Ostrom suggests that, when a set of ‘design principles’ are met, users may be better able to manage renewable resources than an outside enforcer (Ostrom 1990). Our RCT investigates two of these ‘design principles’, community monitoring and awareness of rules. Our work contributes to current literature on renewable resource management, by improving causal identification (existing studies of community forest management are observational) and by isolating individual design principles by Ostrom (observational studies are forced to consider a combinations of these). This project is part of a set of six simultaneous RCTs, in six different countries. A pre-registered meta-analysis, unique in this field, will shed light on the effectiveness of community monitoring across these contexts.

The baseline for this RCT has been completed in all 110 communities, the endline is planned for October-November this year. During the baseline, we measure forest use in three different ways: a household survey, and on-the-ground assessment of the forest, and through satellite imagery. The intervention is two-fold. First, a community monitoring intervention, where individuals from the community are trained to assess forest use, produce a poster with this information, and hold a community meeting to discuss the level of (over)harvesting each month. Second, an awareness of forest use rules intervention, where all consenting community members receive a monthly SMS message reminding them of forest use rules.

Recalling conflict experiences and deep determinants of behaviour

With Mareike Schomerus and others, I designed a lab-in-the-field experiment, investigating how recalling experiences of violence affects individuals’ behaviour. Data collection for this experiment in Northern Uganda is now completed (N=700).

Numerous studies suggest that individuals who have experienced violence behave differently from those who have not: this experience may affect a person’s risk preferences, time preferences, and tendency to engage in pro-social behaviour (Bauer et al. 2016). Two questions remain: whether this relationship is causal, and why this relationship exists. Our study is a rare field experiment, providing causal estimates. Furthermore, we designed a novel, interdisciplinary approach to get at the ‘why’ question.

The set-up of this experiment is as follows. Individuals assigned to the treatment group are asked to recall an experience from the time when Northern Uganda was affected by conflict, the control group is asked to recall a more recent experience. Participants then classify their own experience on various scales, giving us insight into what is being recalled. Then, participants’ risk aversion, time preferences and tendency towards anti- and pro-social behaviour are measured through a series of behavioural games. A subset of participants is contacted later for a semi-structured interview. Through this interdisciplinary method, we aim to both establish *whether* recalling violence indeed changes determinants of behaviour, and, by analysing the experiences recalled as well as responses during qualitative interviews, gauge the *processes* behind this relationship.

Future research

In my future research, I aspire to create further innovative work by applying insights from behavioural science to the study of violent conflict, and by building on my research on artisanal mining and conflict.

Behavioural science, which relaxes the assumption that individual decision-making is governed by rationality, is extremely pertinent to situations of violent conflict, yet seldom applied here. Building on my previous work on fear and support for a civilian militia in South-Sudan, and the abovementioned lab-in-the-field experiment, I strive to continue working in this area. With Mareike Schomerus and Rebecca Wolfe, I have combined 12 articles on this topic into a special issue proposal. With Anna Petherick, I have made a start on a project on violence and voter preference for male rather than female candidates.

Over the course of my project on conflict diamonds, I have gathered much more material than I have currently used. This additional material can benefit a book project, aimed at a wider audience. Books such as “Blood Oil” (by Leif Weinar) or “Oil Wars” (by Michael Ross) have gained international attention, but no similar book on conflict diamonds exists yet. I have also made contacts with governmental and non-governmental actors working with artisanal miners, through attending the Kimberley Process Intersessional meeting. Building on these contacts and my experience with experimental methods, I seek to design an RCT to strengthen the contribution of artisanal diamonds to livelihoods. Diamond mining presents a highly irregular flow of income, and such income flows have proven to be susceptible to behavioural interventions in other contexts (e.g. agriculture, micro-credit). But to my knowledge, no RCT in which artisanal miners participate exists.