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Political violence and social networks: Experimental evidence from a Nigerian election ☆

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ABSTRACT

Voter education campaigns often aim to increase political participation and accountability. We followed a randomized campaign against electoral violence sponsored by an international NGO during the 2007 Nigerian elections. This paper investigates whether the effects of the campaign were transmitted indirectly through kinship, chatting, and geographical proximity. For individuals personally targeted by campaigners, we estimate the reinforcement effect of proximity to other targeted individuals. For individuals who self-report to be untargeted by campaigners, we estimate the diffusion of the campaign depending on proximity to targeted individuals. We find evidence for both effects, particularly on perceptions of violence. Effects are large in magnitude — often similar to the average effect of the campaign. Kinship is the strongest channel of reinforcement and diffusion. We also find that geographical proximity transmits simple effects on perceptions, and that chatting conveys more complex effects on behavior.

1. Introduction

For democracy to deliver politicians that improve the welfare of the masses, citizens must be informed and vote to hold politicians accountable. Yet politicians often manage to secure votes by stirring up greed, rivalry, or fear. Improving democracy therefore requires that we find ways to reduce the role that greed, rivalry and fear play in the electoral process, especially in young democracies such as those in Africa.

Using field experiments in Benin and in Sao Tome and Principe, Wantchekon (2003) and Vicente (2010) study greed: they show that politicians attract more votes by using clientelistic or vote-buying electoral platforms, respectively. The study of the use of rivalry in politics has centered on ethnic tensions. Using a natural experiment in the border region of Malawi and Zambia, Posner (2004) provides evidence that ethnic identification is endogenous to political conditions. This finding is reinforced by Habyarimana et al. (2007) using lab experiments in Uganda, and by Eifert et al. (2010) using Afrobarometer data across ten African countries. In this paper we focus on the use of fear in elections.

The fundamental question is: what can be done to reduce the role of malfeasant electoral strategies like vote-buying, ethnic polarization, or violent intimidation? Vicente (2010) shows that a campaign against vote-buying reduced its influence on the vote but also decreased turnout. Using the field experiment we exploit in this paper, Collier and Vicente (2011) show that an awareness campaign encouraging Nigerian voters to oppose electoral violence was successful in reducing the perception of local violence and in encouraging empowerment. This finding stands in contrast with those of Dellavigna and Kaplan (2007) and Dahl and Dellavigna (2009), who study the perception and behavioral effect of broadcasting information on violence and crime. Namely, Dellavigna and Kaplan (2007) find that stressing information related to terrorism appears to generate a sense of paranoia. No such effect is documented by Collier and Vicente (2011), possibly because of the very different context and nature of the treatment.

If awareness campaigns can successfully reduce the role of electoral malfeasance, this raises the question of what proportion of the population

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must be reached for a campaign to be successful. It is indeed onerous and, in many cases, infeasible for campaigners to visit every household. In this paper we investigate whether visiting some individuals affects other individuals as well. We do so using the same randomized field experiment as Collier and Vicente (2011). This experiment was designed not only to evaluate the average effect of the anti-violence campaign undertaken in Nigeria before the 2007 elections, but also to investigate the possible existence of peer effects of the campaign.

The experiment was organized as a randomized controlled trial. Pairs of selected locations (urban neighborhoods or villages) with similar characteristics were randomly assigned, one to treatment and the other to control. In treated locations, campaigners distributed materials (pamphlets, items of clothing) bearing an anti-violence message. They also organized town meetings and theater plays ('popular theater') aiming at boosting electoral participation and at discouraging people from voting for politicians who promote or condone electoral violence. Control locations were not visited by campaigners.

Within each treated or control location, a representative sample of 50 individuals (one per household) was randomly selected and surveyed before and after treatment. The experiment was designed so that, in treated locations, individuals surveyed at baseline were subsequently visited at their homes by the campaigners, who gave them campaign materials and invited them to attend the town meeting and popular theater. We call this sample the targeted individuals because they were the only individuals explicitly targeted by campaigners. In treatment locations we also surveyed, after the campaign was over, a randomly selected sample of individuals (one per household) who self-reported not having been visited by campaigners. We call these individuals the untargeted. Note that this group was randomly selected only if: (i) campaigners followed their protocol rigorously, i.e., they did not approach any other individuals beyond the targeted, and (ii) individuals remembered and reported correctly whether campaigners approached them. We have no way of fully verifying either of these. In any replication of this study, it would be better to draw both targeted and untargeted individuals in a random fashion from the beginning of the experiment, without relying on self-reports to code whether they were targeted by campaigners or not. We discuss in the paper how we deal with potential self-selection into the untargeted group. Individuals in control locations are referred to as control individuals. Within each control and treated location, we collected information about social links and geographical proximity between individuals. Social proximity is measured by kinship (i.e., family ties) and the frequency of social interaction (i.e., chatting). In the conclusion we discuss various ways in which the experimental design could be improved.

We are interested in the effect that a house call by campaigners to one individual, say *i*, has on another individual, say *j*, and whether this effect is stronger if *i* and *j* are close in a social or geographical sense. We distinguish between two types of effects, depending on whether *j* was himself/herself visited by campaigners or not. If both individuals *i* and *j* were visited by campaigners, we test whether the effect of treatment on *j* is stronger when *j* is closer, in a social or geographical sense, to other targeted individuals. We call this a reinforcement effect since it reinforces the effect of targeted treatment (i.e., house visit) on *j*. To test for the presence of a reinforcement effect, we observe whether, relative to controls, the effect of the campaign on the perceptions and behavior of targeted individuals is reinforced by proximity to targeted individuals in the same location.

If individual *j* was not visited by campaigners, *j* may nevertheless have experienced an indirect effect of the campaign compared to individuals in control locations. We test whether the effect of the campaign is stronger if *j* is socially or geographically close to targeted individuals. We call this a diffusion effect since it diffuses the effect of the campaign to untargeted individuals. To investigate diffusion effects we test whether, compared to controls, untargeted individuals show stronger effects of the campaign when they have closer social ties to targeted individuals in their location.

Collier and Vicente (2011) show that the campaign had a significant effect on decreasing the intensity of actual violence reported by independent journalists. Furthermore, in terms of homogeneous (average) effects of the campaign on individual-level outcomes, it is found that perceptions of violence were generally diminished, both in terms of targeted vs. control and in terms of untargeted vs. control groups. Behavior was altered for targeted vs. control only: Collier and Vicente (2011) observe higher levels of turnout, of voting for incumbents, and of empowerment to counteract violence, as a result of the anti-violence campaign. The bottom line is that the campaign was able to reduce perceptions of violence for both targeted and untargeted individuals, but was only able to affect the voting behavior of individuals directly targeted by the campaign.

In this paper, we find evidence of both reinforcement and diffusion heterogeneous effects. For reinforcement, we find a robust effect on decreasing respondents' perceptions of violence. What seems to matter most is kinship but geographical proximity is also significant. We observe some albeit limited reinforcement effect on behavior through chatting and kinship. For diffusion, we find robust effects on perceptions of violence and on voting behavior using a variety of estimation methods. The pattern is similar to reinforcement: kinship ties and geographical proximity to targeted individuals reduce respondents' perception of violence. Chatting and kinship ties to targeted individuals are associated with significant effects on behavior. Overall, the magnitude of estimated coefficients is similar across reinforcement and diffusion. Kinship ties were particularly effective in spreading the effect of the campaign. For instance, reinforcement and diffusion of the campaign through kinship ties led to a decrease in respondents' perceptions of political freedom and violence by 0.21–0.23 standard deviations (for an individual with average kinship). This compares to a homogeneous treatment effect of 0.34–0.39 standard deviations.

Taken together, the results indicate that geographical proximity to targeted households reduces primarily perceptions of violence. This suggests that proximity to targeted individuals increased the visibility of the campaign, possibly through the pamphlets and clothing bearing the anti-violence message that targeted individuals received. Social proximity, in contrast, appears to have been useful in spreading the more complex parts of the campaign relative to collective action since it affected behavior associated with empowerment and voting. Since network links were not experimentally assigned, we cannot completely rule out the possibility that proximity variables may be correlated with unobservables that affect susceptibility to treatment. This is a problem that affects much of the existing literature.

Our estimation of network effects in the context of a randomized field experiment relates to a recent body of literature on the role of networks in aid interventions. Kremer and Miguel (2004) launched this literature by estimating externalities of a deworming school-based program in Kenya. They estimated the impact of the treatment on control populations. Because their design features program randomization at the school level, it did not allow for an experimental estimation of individual externalities within treated schools. More recently, Angelucci et al. (2010) extend the study of externalities to a conditional cash transfer program. By exploring a rich set of outcomes at the household level they are able to throw some light on specific mechanisms by which unexposed households are influenced by treatment. These authors, however, do not use explicit network information. Also in the context of a conditional cash transfer program, Macours and Vakis (2008) introduce explicit interaction among households but focus on reinforcement effects only. Angelucci et al. (2010) extend the analysis to diffusion but limit their analysis to kinship links. The work by Nickerson (2008) relates closely to our study: his focus is on using randomized get-out-the-vote house visits to identify peer-effects in two-member households. Recently, Gine and Mansuri (2011) estimate spillovers of a get-out-the-vote campaign in Pakistan using geographical data. Our result that kinship proximity is more important than other measures