Legacies of Violence: Trust and Market Development

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Abstract

We study the effect of individual exposure to civil conflict on trust and preferences for market participation. We conducted behavioral experiments and surveys among 426 randomly selected individuals more than a decade after the end of the Tajik civil war. We find that exposure to violence undermines trust *within* localities, decreases the willingness to engage in impersonal exchange, and reinforces kinship-based norms of morality. The effect is strongest where infighting was most severe and where political polarization is high. Robustness of the results to the use of pre-war controls, village fixed effects, and alternative samples suggest that selection into victimization is unlikely to explain the results.

Key Words: Civil war, trust game, market institutions, Tajikistan

JEL Classification: C93, D03, O53, P30

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1. Introduction

There is no clear consensus in the literature on the long-term consequences of war and conflict-related violence on a society's prospects for development. One group of studies puts civil war at the forefront of the underdevelopment trap and highlights the economic, social and political disintegration that has followed many conflicts (Collier et al. 2003; Collier and Hoeffler 2004). Another long tradition in economic and political history characterizes war and inter-group competition as preconditions for nation building, state formation, and market development (Tilly and Ardant 1975; Tilly 1985; Greif 2006). Given the importance of institutions and social norms for growth and development, much is likely to depend on the social and institutional legacy of conflict, which has been described as "the most important but least understood of all war impacts" (Blattman and Miguel 2010, p. 42). Intriguingly, a number of recent studies show that exposure to conflict intensifies certain positive prosocial elements within individuals (Bauer et al. 2011; Bellows and Miguel 2009; Blattman 2009; Voors et al. 2012) and communities (Gilligan, Pasquale and Samii 2011), leading some to defy pessimistic views of the effect of conflict on development (Voors et al. 2012). Other theoretical and empirical work, however, points to negative consequences of conflict on inter-ethnic trust and trade (Rohner, Thoenig and Zilibotti 2011a and 2011b).

Our work contributes to this micro-behavioral literature by considering the effects of violence on trust. We focus on trust due to the growing body of evidence that cultural attributes, in general, and trust, in particular, are vital determinants of economic performance. Trust plays an essential role in promoting cooperation and generalized trust is fundamental to initiating trade with anonymous others - a prerequisite of successful market development (Fafchamps 2006). At a more macroeconomic level, trust has been associated with institutional quality (Knack and Keefer 1997, La Porta et al. 1997), financial development (Guiso, Sapienza and Zingales 2004), entrepreneurship (Guiso, Sapienza and Zingales 2006), GDP growth (Algan and Cahuc 2010), and trade (Guiso, Sapienza and Zingales 2009). Our research examines experimental and survey evidence of the effects of civil conflict on trust and market development in a case study of the post-Soviet Republic of Tajikistan. We report the results of a series of experiments and a survey designed to investigate whether, more than 10 years after the end of the conflict, the 1992-1997 Tajik civil war has left any imprint on preferences and social norms that are thought to sustain the

development of impersonal exchange. We consider the effects that conflict exposure might exert on behavioral measures of trust towards different groups and on individual stated and revealed preferences for participation in markets, participation in collective action and on the strength of kinship ties.

Our findings point to negative and persistent, yet heterogeneous, effects of violence on the norms that support impersonal exchange, in particular on trust within local communities. Victimization during the civil war is associated with a 40% average decrease in trust (the amount sent by the first mover in the trust game) when respondents are matched to another individual from the same village. Survey-based evidence on actual behavior and stated preferences corroborates experimental findings. Consistent with the decrease in local trust in the experimental games, former victims are both less likely and less willing to participate in local markets, especially when they do not have a personal connection with the trader they are dealing with. Our results also indicate that experiences of victimization are associated with reinforced kinship-based norms of morality and behavior, at the expense of the rule of formal law. However, such negative effects of violence are heterogeneous and depend in part on the nature of infighting within local communities. The negative effects are more pronounced in regions where opposing groups inter-mix and where local allegiances were, and still are, split. This leads us to speculate that effects of conflict on local norms are mediated both by the specificity and the salience of war-time divides. This, in turn, may explain why the emerging literature on conflict and pro-sociality has found both positive and negative effects.

We hypothesize that the nature of fighting in the Tajik civil war, characterized by localized intra-group conflict, explains the observed disruption of norms and preferences among victims of violence. As a largely intra-Tajik war, people were unable to apply basic cues to identify friend from foe within their communities. As perpetrators of violence and authors of denunciations may still be close by, victims should be especially wary and guarded about whom they can trust.[1]

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[1] Unlike many other civil wars, there has been no formal investigation of war crimes, what leaves substantial uncertainty, even today, about the identity of perpetrators of violence or authors of denunciations. This contrasts with, for example, post-conflict Rwanda, where prosecution of war crimes by international, national and, more importantly local "Gacaca" tribunals is an integral part of the reconciliation process (International Institute for Democracy and Electoral Assistance 2003). Tajikistan also lacked the support of a neutral third-party peacekeeping intervention to provide security guarantees to local communities.

The effect should thus be most stringent in areas where the population was, and still is, of inter-mixed political allegiance. We rely on regional variation in the nature of fighting during the civil war in order to test this mechanism further. We build an index of political polarization at the village level. We find that the association between conflict exposure and undermining of local trust, willingness to trade and strength of kinship is only present in villages that are above the median in terms of political polarization but absent in villages that are below the median. This result is robust when, instead of actual political polarization, which could be an outcome of the conflict, we rely on political polarization predicted by the physical distance to Afghanistan and to Uzbekistan – both widely recognized as important entry points for weapons and insurgent transit into Tajikistan during and after the civil war (Abdullaev and Barnes 2001). We also contrast the effect in the two regional polar-opposite cases: the Pamir region where no community infighting occurred, and the environs of the capital city Dushanbe, one of the most inter-mixed regions of the country. Consistent with our interpretation, negative results are strongest in the Dushanbe region but absent in Pamir. Our results suggest that civil war may have particularly deleterious effects in regions where opposing groups inter-mixed. This last implication is consistent with recent findings by Rohner, Thoenig and Zilibotti (2011b) that ethnic conflict in Uganda has hindered cohesion in ethnically divided districts but has had little effect in ethnically homogenous districts.

We assess trust through lab-in-the field experiments. We utilize a simplified version of the trust game under two treatment conditions: Same Village, in which the anonymous second player is someone who lives in the same village as the first player, and Distant Village, in which the second player might come from anywhere in Tajikistan, therefore naturally a more abstract concept. The experiments are then followed by an in-depth survey. We carried out our study with 426 randomly selected individuals in 17 villages in four regions of Tajikistan (Dushanbe, Khatlon, Gharm and Pamir). We chose Tajikistan in part because, as a Soviet creation, market development was prohibited prior to the onset of the conflict, thus making it a compelling case for studying market foundations. Tajikistan is also at the heart of a region whose strategic importance is matched only by its instability, at the crossroad between the Xinjiang region of China, Afghanistan, Uzbekistan and Kyrgyzstan, all of which have experienced civil unrest in recent years.

To address concerns about selection into victimization, we employ three strategies. First, we use a selection on observables strategy. Our results are robust to controlling for a large number of characteristics, including the determinants of victimization, religiosity, active participation in combat, and to including as an additional regressor a measure for altruism based on the dictator game to address the concern that people were selected into victimization on the basis of their pro-social preferences. Second, because of the very localized nature of the conflict, all specifications include village fixed effects. Village fixed effects enable us to isolate the variation in violence experienced across neighbors within the same village. Third, we focus our analysis on different sub-samples. We restrict our attention to individuals who were too young to be systematically targeted – those who were 14 or younger at the beginning of the conflict. We also consider the sub-sample of people who have never moved in order to rule out that our results are due to selective migration. Taking all the evidence together, our analysis indicates that selection into victimization is unlikely to be the factor driving our results. Another concern is that our results are driven by Tajikistan's post-war environment rather than exposure to violence during the conflict. An analysis with survey data collected in 1996, roughly 6 months before the signing of the final peace agreement, suggests that this is not the case.

The next section reviews the relevant literature. Section 3 presents some background on the Tajik civil conflict and discusses our main hypotheses. Section 4 presents the experimental design and the survey methods. Section 5 describes the empirical strategy. Section 6 discusses the results and Section 7 concludes. More information on the Tajik civil war and additional results can be found in the Supplementary Appendix.

2. Relevant Literature

This paper contributes to two main strands of the literature: first, the literature on the origins of prosocial preferences; and second, the literature on the social and institutional legacy of conflict. While long-term effects of war have been primarily studied in terms of economic activity, industrial recovery, and their effects on physical and human capital[2], the impact of

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[2] For a review of the effects of civil war, see Blattman and Miguel (2010).

conflict on preferences is just beginning to be examined experimentally (e.g. Bauer et al. 2011; Voors et al. 2012; Gilligan, Pasquale and Samii 2011).

For a long time economists have assumed individual preferences to be exogenously determined and fixed (Stigler and Becker 1977) or, at least, a topic to be studied by other social scientists. As a stark departure, in the past couple of decades, experimental and behavioral economists have begun to identify predictable determinants of preferences and sources of preference changes (e.g. Loewenstein and Angner 2003). The question is important for many fields of economics and for development in particular, since preferences such as trust and fairness have been associated with positive development outcomes (for a survey, see Cardenas and Carpenter 2008). Greater levels of fairness and punishment have been found to positively co-vary with market integration and community size, providing evidence that preferences are not uniquely exogenously determined, but might have co-evolved over the course of human history jointly with norms and institutions (Friedman 2008). Given increasing evidence of different behavioral preferences across groups, our research addresses the issue of whether current conditions and past experiences can affect preferences in a persistent and systematic way.[3]

In this paper we focus on prosocial preferences such as trust, because they have been found vital to solving cooperation and coordination problems and therefore crucial for economic and social development. Societal trust has been positively associated with growth and market development (e.g. Knack and Keefer, 1997; Zak and Knack, 2001; Henrich et al. 2010). Recent studies have shown how other-regarding preferences are critical for human cooperation in large groups (Bowles 2006; Boyd and Richerson 2005) and collective action (Bowles and Gintis 2006). The role of impersonal social trust in sustaining economic exchange is the object of an ever-growing literature. A prerequisite for the successful development of market economies is to depart from closed group interactions and to enlarge exchange to anonymous others (Fafchamps 2006; Algan and Cahuc 2010). In this regard, generalized trust appears as a keystone for successful market development. Generosity, a sense of fairness and trustworthiness may also help sustain trade and cooperation in countries where institutional contracts enforcement is weak by preventing contract

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[3] Some related evidence is presented by Cassar, Healy and von Kessler (2011) who find that Thai subjects affected by the 2004 tsunami are, four and a half years after the event, significantly more trusting and more risk averse.

violations. Even in countries with well-functioning institutions, trust may play an important role, given the incomplete nature of contracts.

If circumstances and experiences can affect prosocial preferences, we ask whether they are also shaped in a predictable manner by war and civil conflict. Recent literature on the behavioral legacies of conflict offers surprisingly consistent evidence of increased prosocial behavior after violence, with disconcertingly positive implications for the effects of war on social capital building. In particular, Bellows and Miguel (2009) find a significant increase in collective action among the individuals more affected by the war in Sierra Leone. Blattman (2009) reports higher voting and political action among former child soldiers in Uganda. Using lab-in-the field experiments, Voors et al. (2012) find that individuals with exposure to greater levels of violence during the war display more altruistic behavior towards their neighbors, are more risk seeking, and have higher discount rates. Bauer et al. (2011) provide evidence of higher egalitarianism and parochialism among victimized children in the Republic of Georgia after the war with Russia, as well as among subjects victimized as children during the civil war in Sierra Leone. At the community level, Gilligan, Pasquale and Samii (2011) find that communities with greater exposure to violence during the Maoist rebellion in Nepal exhibit more trust and higher levels of collective action.

While there is growing evidence of prosocial behavior after violence, some recent studies also provide cautionary evidence to the contrary. Becchetti et al. (2011) report lower trustworthiness among individuals most affected by violence in Kenya. Rohner, Thoenig, and Zilibotti (2011b) find detrimental effects of conflict on inter-ethnic trust and trade in Uganda. The effect is particularly strong among ethnically divided communities. Nunn and Wantchekon (2011) also show that violence and a history of violence, going as far back as the slave trade in Africa, can still impact contemporary trust negatively and strongly. They find a remarkably robust negative legacy of the slave trade on general trust which they attribute to the destruction of social ties by inter-ethnic slave raiding that took place hundreds of years ago.

In conclusion, given the importance of trust for development, an important channel through which conflict can affect development and growth is the effect it may exert on such pro-social preferences. Anticipating our results, our study casts a pessimistic view: violent

conflict, especially civil war characterized by insurgency and community infighting, can have highly detrimental effects on trust within a society.

3. Research Hypotheses

3.1. Theoretical Foundations

From a theoretical perspective, an important foundation for our work comes from the culture/gene evolutionary approaches to understanding human cooperation. A fascinating hypothesis since Darwin is that frequent lethal conflict between different groups (inter-group conflicts) is at the very origin of human altruism and prosocial behavior (Darwin 1873). In the absence of war or other selective pressures between groups, evolutionary forces select for selfish free-riders. In such a scenario, the existence and sustainability of altruism and prosocial behavior in large groups of genetically unrelated strangers is an evolutionary puzzle. On the contrary, if selective pressures apply at the group level, for example as a result of frequent deadly inter-group conflict, survival of the fittest group would favor groups abounding in altruists and prosocial individuals, who are ready to cooperate with one another. Such selective pressures would open a gap between insiders and outsiders: a differential treatment that dictates generosity towards the insiders but selfishness toward the outsiders, those who represent a threat - a behavioral gap referred to in the literature as parochialism (Bowles 2006; 2008; 2009; Choi and Bowles 2007; Boyd and Richerson 2005). While the cited literature does not model the case of intra-group conflict specifically, following the same logic we should expect to observe less cooperative and prosocial behavior between members of groups experiencing in-fighting.

We believe that a crucial feature: the boundary of the in-group relative to that of the out-group – those who represent a threat, affects the formation of preferences. Because the nature of the groups involved varies widely across different conflicts: whole countries against one another, ethnic groups against one another, or neighbor against neighbor, it could have important consequences for prosocial preferences and explain the apparently contradictory results of the literature reviewed in Section 2. Data limitations prevent us from testing the specific mechanisms operating at the evolutionary level, as postulated by those models. We test, instead, a within-individual behavioral reaction to victimization in the spirit of those

theories, but without making any claims about possible genetic origins of such psychological reactions.

Parochialism, and the greater trust associated with it, may be positive for market development, but only within the boundaries of one's group. The implication of conflict for market development and growth will therefore depend too on the type and nature of conflict. If conflict involves village against village or region against region, greater trust and fairness within the village or region as a whole may have positive consequences for the development of market institutions. But if, on the contrary, neighbor is turned against neighbor, one may expect the opposite: less trust and fairness between individuals living in the same village. The unobservability of individual allegiances may complicate this further. As in Rohner, Thoenig and Zilibotti (2011a), conflict may signal negative qualities of the opponent group. In Rohner, Thoenig and Zilibotti (2011a), conflict signals a negative propensity to trade, but, more generally, it may signal other negative qualities, such as dishonesty or untrustworthiness. The fear of dealing with a dishonest partner will drive trading opportunities out. Akerlof (1970) describes this as the "cost of dishonesty", a situation identical to the canonical problem of the automobile market for lemons. In order to overcome this cost, people turn towards their kin and may only be willing to trade with members of their family or clan. We now consider this problem in the case of a devastating civil war in the former Soviet republic of Tajikistan.

3.2 Background on the Tajik Civil Conflict and Operational Hypotheses

When the Soviet Union collapsed, Tajikistan collapsed with it, and regional rivalries, many of which were intentionally developed and exploited during the Soviet era, gave way to a brutal power struggle that lasted from 1992 until a negotiated settlement brought a tenuous peace in 1997. Over a decade later, and nearly two decades from the start of the conflict, we test whether effects of violence are enduring or not (see the Supplementary Appendix for detailed background information on Tajikistan and the civil conflict). One possibility, the null hypothesis, is that pro-social and pro-market economic preferences are not systematically different between individuals that were heavily affected and those who were less so (since everyone is presumably affected, to varying degrees, by a civil conflict that lasts

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years). An alternative hypothesis is that, at the individual level, the more direct and personal the experience of violence, the more dramatic the effects in altering trust.

What makes the Tajik civil conflict interesting is the complex networks of rivalries that emerged within local communities during the fighting. The conflict was mainly fought on the basis of allegiances that were not directly observable. It was often difficult to make simple shorthand predictions about who was fighting whom in the midst of the chaos of the conflict zone. The various warring factions were not readily identifiable. Among combatants, the Russians and Uzbeks are the only ones who really faced the problem of being readily identifiable by physical appearance and language. Eastern Pamiris (Gorno-Badakhshan) were better capable of blending in and transitioning between Tajik and their Pamiri dialects and are not as clearly identifiable as Russians and Uzbeks. There are many examples of the "not readily identifiable" aspect of the conflict. It was widely reported that government soldiers in Dushanbe and elsewhere would stop people at random demanding identity papers, where those with Pamiri names or born in the Gharm region were arrested or summarily executed on suspicion of being linked to the opposition (Jawad and Tadjbaksh, 1995; Hiro, 1995).[4] The opposition applied similar tactics in the capital and when dealing with southern Kulyabis in the Kurgan Teppe region. There were also instances of regionally mixed villages, ethnic/regional inter-marriages, and intra-regional violence that further complicated identification (Tuncer-Kilavuz 2009). In many cases, factions of the same groups were even fighting among themselves within their local communities (Tuncer-Kilavuz 2009, 2011). Unlike many other civil wars, there has been no formal investigation of war crimes since the end of the conflict, resulting in substantial uncertainty, even today, about the identity of the perpetrators, collaborators, and facilitators of violence.

We believe that community infighting and uncertainty - the inability to distinguish friend from foe in conflict - may have profound effects on social norms, especially at the local level, by creating concerns about trusting people close by. Local communities are usually considered to be safe havens for trust, even in times of violence as long as enemies are readily identifiable as outsiders and front lines can be drawn. In the Tajik civil war, this was

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[4] As a further example of the not-identifiable problem, in one story recounted to one of the authors in an interview, if someone were caught without documentation, they might be asked to pronounce certain words or name specific objects to catch subtle dialectical differences between pro-government and pro-opposition groups.

not the case. The local environment was extremely dangerous and unpredictable. In contrast to the usual logic of trust (declining as the network of people expands to include more distant strangers) here trust is conditioned by the probability of others taking advantage of you or doing you harm. In this case, people in the village are in the most likely position to take advantage or harm others. The conflict provides a framework for common knowledge about the uncertainty of others close by. Because local environments provide many of the foundations for political and economic communities, we argue that the depletion of prosocial norms in local communities will have profound effects on the willingness to participate in exchange and on market development.

The role of uncertainty and local infighting leads us to hypothesize substantial variation across regions and within villages in the relationship between conflict exposure and preferences. Among the four regions sampled, three (Dushanbe, Khatlon, and Gharm) were conflict zones with intra-Tajik infighting within local communities, while the fourth region (the remote, mountainous Pamir) avoided infighting entirely. The extreme opposite case is the region around the capital city Dushanbe, the most inter-mixed region, which experienced repeated clashes between government and opposition forces from day one of the conflict. Comparisons between the Pamir and Dushanbe will shed additional light on our hypothesis about readily identifiable past enemies: we expect that the inability to distinguish friend from foe would result in a collapse of local trust in the former conflict regions, but not in Pamir. Similarly, we expect stronger effects in villages that are more polarized politically. In addition, within villages, we expect a stronger effect for victims who have never moved and are still living together with the potential perpetrators of violence.

4. Experimental Design and Survey

4.1. Experimental Protocols

To elicit individual preferences we had subjects participate in three games: the dictator game, the ultimatum game and the trust game. We always run them in this order (given the natural increase of each game's complexity) without disclosing to the first player in each game the decision taken by the second player in the previous game until the very end, and only for the game randomly selected for payment in order to prevent dependency between games. For

comparison purposes, our instructions were based on the ones used for the *The Roots of Human Sociality*.[5] The original protocol was modified to include our Same Village / Distant Village treatments, to preserve anonymity and to fit the Tajik environment. In each session the second movers in the games were randomly assigned to be someone either from the same village as the subject or from somewhere else in Tajikistan (see the treatment description below). The dictator game is used in this paper as a control for individual altruism in robustness tests. For economy of space, we do not discuss the implementation details or results for the dictator and ultimatum games in this paper.[6] Instructions for all games are provided in the Supplementary Appendix.

Our trust game is based on the classic Berg, Dickaut and McCabe (1995) protocol. A first mover has to decide how much of an initial amount I to send to a second mover. The amount sent (X, with $0 \leq X \leq I$) is then multiplied by 3 before reaching the second mover. The second mover receives $3X$ and has to decide how much of that sum (Y, with $0 \leq Y \leq 3X$) he/she wants to return to the first mover. X can then be interpreted as an indication of trust while Y as a measure of trustworthiness. In our adaptation, we gave each first mover 20 Somoni (indicated on a form) along with 5 options for dividing the money (0, 5, 10, 15, 20). We only used 5 options to simplify the game to the basic decision-making focal points used by other studies. In the first part of the game, all of our subjects play as the first mover, and then, in the second part, all played as second mover, using the strategy methods and without revealing what the first mover had actually sent to them.

To avoid issues of correlations across games, we paid subjects only according to one of these game/roles. We announced at the very beginning that we would ask one of the subjects to roll a 6-faced die after all tasks are completed and the number would determine both the game according for which they would be paid and the role for which they would be paid (either as Player 1 or Player 2). It is important for our protocol that no information was revealed in the various games until the very end and only if the game/role was selected for payment. To not undermine dominance and introduce other motivations (like simply having

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[5] An Ethno-Experimental Exploration of the Foundations of Economic Norms in 16 Small-Scale Societies. Principal investigators: Jean Ensminger and Joseph Heinrich. Instructions and other information available at: http://www.hss.caltech.edu/~jensming/roots-of-sociality
[6] Interested readers can find the dictator game and the ultimatum game analysis available upon request.

fun while participating), we never called these activities games or refer to it as play; we used more neutral terms like task, decision making, make a choice, etc.

In addition to their earnings, all participants received a "show-up" fee of approximately $3 in local currency. Total earnings ranged from 0 to 60 Somoni (0-13.50 USD) with an average of 24 Somoni with a standard deviation of 10.9 (approximately $5.40, SD = $2.46) excluding the show-up fee[7]. Fieldwork started on June 1 and sessions ran from July 1 to July 24, 2010. In total, 426 subjects completed the study. Additional sample characteristics are listed in the analysis below.

4.2. Treatments

In order to test our hypothesis we implemented 2 treatments: "Same Village" (SV) and "Distant Village" (DV). In the SV treatments we explained to the subjects that for each game the second mover was selected among people from the same village, while under DV we explained that the second mover was selected from people from a distant village. We described "Same" and "Distant" villages by showing the subjects a map of their country and pointing to the location of their village ([sic] "Yes, that's right, that's your village"). For the SV treatment, we explain that whatever money the subject elects not to keep (if any) will be sent anonymously to another person that lives in the same village and who will participate in a future session. Subjects are also paid based on offers from an anonymous other who participated in a previous session in the same village.

For the DV treatment, we draw on the map a large circle around their village and we explained that the distant village could be anywhere outside that circle ([sic] "Yes, that's right, that's your village, and those are all different villages very distant from here"). We then explained the payoffs for first players and second players in a similar manner to the SV sessions. For the DV sessions, we used the offers from the first movers from previous locations in which we used the DV treatment (using pilot data for the very first one).

4.3. Subject Recruitment and Sampling Frame

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[7] At the time of our study, the average monthly wage in Tajikistan was approximately 300 Somoni or $70. Hence, subject earned on average more than a day's wage.

The subjects were selected using a multi-stage sampling method. 426 individuals were surveyed and administered the games in 17 villages in 4 regions: Dushanbe, Khatlon, Gharm and Pamir. In Dushanbe, Pamir and Gharm, the selection of villages (the first sampling stage) was made at random with probability of selection proportional to population size. Villages in Gharm were chosen at random within the sub-stratum of the Rasht Valley. Sampling was based on the latest available census data of Tajikistan. On arriving at the sampling point, each enumerator was randomly assigned a starting point within the town or village. For the selection of households, each enumerator followed the standard "random route" technique, starting with 5th numbered apartment building or house selecting every 5th entrance. Individual respondents (1 per household) were chosen using a random selection key (a 12-face die) where every adult member of the household had an equal probability of being selected. For each sampling point, all recruitment of subjects and data collection was conducted on the same day using a team of enumerators and administrators to conduct the survey and to run the experiments. In Dushanbe, Gharm, and Khatlon, the team consisted of the same group of five ethnic Tajik enumerators and one ethnic Uzbek enumerator, in addition to one of the principal investigator and two graduate students. In Pamir, we substituted a different team of four ethnic Pamiri enumerators and a Pamiri administrator. The local teams were trained by the two graduate students and by one of the authors of this paper who was always on site to supervise data collection. Descriptive statistics of our sample are displayed in Table 1.[8]

To address issues of framing either the experiment or the survey, we conducted some sessions in which the experiment came before the survey and others in which the order was reversed. For the survey, most of the subjects were interviewed privately in their home by a local enumerator. In cases where the home environment was not sufficiently private or accommodating, subjects were interviewed outdoors or at another private location. Once subjects completed the survey, they were escorted by their enumerator to a common location in the town or village to participate in the experiment. Most sessions were conducted in schoolrooms, where each person had their own desk and chair. In villages

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[8] Our sample is overwhelmingly female, but this reflects the situation in Tajikistan, where many males are migrant workers, mostly in Russia. 30% of our sample is male, which is slightly lower than the 40% male sample in the Life in Transition Survey (LITS), a nationally representative survey. However, LITS was conducted in late Fall, at the end of the harvesting season, while our surveys and experiment were conducted in July, where demand for field agricultural labor was higher and males were consequently less accessible.

without schools, sessions were conducted in the largest common space, typically a community center or a meeting hall. The sessions were conducted in groups of 10-20 subjects, depending on the size of the room available. Subjects were not allowed to talk with one another during the sessions and this rule was generally well abided. No significant disturbances or interruptions occurred during the experimental sessions. Each experimental session was conducted by a local administrator and an assistant. The administrator read instructions from a standard script. All survey and experimental instructions, forms, and materials were translated into Tajik, Russian, and Pamiri and back-translated into English for accuracy.

4.4. Survey

War victimization is captured through survey instruments. The survey asks about injury, loss of life of any household member, loss of property and forced displacement as a result of the conflict. Respondents were also asked whether they witnessed or directly participated in fighting either during the conflict or since the 1997 peace agreement.

The survey also probes into economic, social and political attitudes. Several attitudes are of noteworthy interest. First, our aim is to provide, through survey questions, a validation of our experimental measures of preferences. We are particularly interested in the implications of the trust game behavior with regards to impersonal exchange. The survey therefore investigates stated preferences towards participating in impersonal exchange and towards market liberalization. In order to measure respondents' actual participation in markets, we follow Heinrich et al. (2010) and ask respondents to report the share of their weekly consumption of food purchased through markets as opposed to self-produced, bartered or exchanged as gifts. Second, we aim at capturing norms of generalized morality and respect for the rule of law as opposed to kinship-based morality. The contribution of generalized norms of morality in solving problems of cooperation and conflict and the contribution of the latter to the development of impersonal exchange and markets has been noted in the literature before, namely by Greif (2006). The survey inquires about procedures of conflict resolution, especially as it relates to conflict emerging during market exchange. Finally, the survey includes several measures of participation in groups, collective action and political participation. The purpose of these questions is to test whether previous findings of the

positive effects of conflict on group membership and local collective action are replicable in the Tajik context.

In the difficult politically self-censoring environment of Tajikistan, we were not able to ask questions about political preferences directly. Nevertheless, we asked questions about participation in elections, both at the presidential and at the local level. Given the absence of political pluralism in Tajikistan, participation in elections can be perceived as a sign of support for the existing political arrangement. We therefore interpret the standard deviation of average voting participation at the village level as a proxy for political polarization. A higher standard deviation is interpreted as a sign of higher polarization. Average participation in elections is 80%. The average standard deviation around the mean of voting participation in presidential elections is 0.078. It is highest in the Dushanbe region (0.089) and lowest in the Khatlon region (0.070). Of course, contemporaneous political polarization is likely to be an outcome of the conflict. In order to deal with this endogeneity issue, we also rely on the same measure of political polarization predicted by physical distance from the village where we conduct our study to the Afghan and Uzbek border, two areas of insurgent activity, cross-border migration, and weapons trafficking during and since the Tajik civil conflict (Abdullaev and Barnes 2001). The average distance to the Afghan border is 203 km (s.d. of 64) and the average distance to the Uzbek border is 212 km (s.d. of 93).

5. Empirical Strategy and Identification

We investigate how war experience affects individual preferences, values and beliefs. The analysis compares individuals who suffered from different degrees of violence during the conflict. The general form of the estimation equation is as follows:

$$Y_{ij} = \beta_0 + \beta_1 W_{ij} + \beta_2 T + \beta_3 X_{ij} + \beta_4 C_j + \varepsilon_{ij} \qquad (1)$$

where our outcome variable Y_{ij} includes different measures of elicited social and economic preferences and market orientation of respondent i in village j; W_{ij} is a measure of the intensity of individual exposure to violence, X_{ij} is a set of individual and household controls, and C_j is a set of village fixed effects. T is a dummy for the Same Village experimental treatment in the regressions using experimental data. We use two measures of individual exposure to civil war violence. The first (*Injured or Killed*) is a dummy variable taking value 1 if

either the respondent was injured or one of his or her household member was injured or killed during the civil war. The second (*Injured and Killed*) is a dummy variable taking value 1 if the respondent reports both injury and loss of life in the household during the civil war. This second measure indicates higher degree of severity of exposure to conflict.[9]

In regressions using experimental data, we want to explore the differential effect of the treatment on victims versus non victims. In order to do so, we include an interaction term between treatment and victimization in the following specification:

$$Y_{ij} = \gamma_0 + \gamma_1 W_{ij} + \gamma_2 T + \gamma_3 T * W_{ij} + \gamma_4 X_{ij} + \gamma_5 C_j + \varepsilon_{ij} \tag{2}$$

Standard errors are corrected for potential heteroskedasticity in all regressions.[10]

The identification of the causal effect of violence is impaired by the problem that victims may be different from non-victims in observable and unobservable ways and so any comparison of victims and non-victims will conflate the impacts of war with pre-existing differences that led some people to be victimized. This is especially problematic if the characteristics associated with victimization are also those associated with the outcomes that we want to observe. If, for example, more pro-social or more market oriented individuals, or villages with higher proportions of such individuals were systematically targeted, this would result in an estimation bias of any effect of the civil war on social preferences and market orientation. To address this issue, we use a three-pronged strategy.

First, we check that our results are robust to the inclusion of a large number of individual and household controls. Of particular concern are variables that may be related both to post-war outcomes and to victimization. We focus on three sets of controls. First, we include characteristics that cannot have been affected by victimization, such as age, gender and ethnicity. Second, we empirically investigate what pre-1992 characteristics are associated with victimization and include them as controls. Third, we include controls that are more likely to be endogenous to our victimization measure and to behavior in the trust game. One major concern is that people were selected into victimization precisely on the basis of their pro-social preferences. To address this, robustness specifications include respondents' behavior

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[9] This second measure of exposure to violence takes value 0 for all individuals in the Pamir region. There was no infighting in that remote region and respondents only report death of a household member, which presumably occurred outside the region.

[10] We do not cluster standard errors, as 17 villages is too little a number of potential clusters in order for clustered standard errors to perform well.

in the dictator game as a control for altruism. Since household size may be associated with our victimization proxy (larger households are likely to have experienced more injuries or death), we also include household size. This last set of controls may result in an over-controlling problem (since both household size and norms of fairness may be both directly impacted by violence and correlated with behavior in the trust game) but still provides a useful check for the validity of our causal interpretation of the results.

Our second strategy employs a selection on unobservables strategy. Specific regions and villages were targeted during the conflict for reasons that are not necessarily observable to the econometrician, for example the support that local clan leaders gave to different fighting factions. Because of the local nature of the conflict, all specifications include village fixed effects. With village fixed effects, identification of the causal effect of conflict requires victimization to be -close to- random within villages, conditionally on household and individual characteristics. In addition, we follow Altonji, Elder and Taber (2005) and gauge how much the importance of unobservable variables would need to be, relative to observable factors, in order to explain away all the effects of war violence on post-war outcomes. Obtained statistics make it unlikely that the omitted variable bias could account for the full effect of civil war on our main outcomes of interest.

Our last strategy is to focus our analysis on different subsamples. We first restrict our attention to individuals who were too young to be systematically targeted – those who were 14 or younger at the beginning of the conflict, or at most 32 years old in 2010.[11] This is about a third of our sample. There is another rationale behind focusing on this subsample. The psychology literature stresses that traumatic events have a stronger impact on younger individuals, particularly in their late childhood or early teenage years. The effects of victimization are thus expected to be of a larger magnitude on this subsample of the population, who were at most 18 at the end of the conflict. A remaining issue is that the results could be driven by selective migration of individuals who experienced violence. Our results would be biased if, for example, war victims systematically migrated to areas where

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[11] A potential limitation of this strategy to deal with the selection into victimization bias is that trust and other prosocial preferences could be partly transmitted within the family. However, although there is a burgeoning theoretical literature on the vertical transmission of preferences since the work of Bisin and Verdier (2001) and Hauk and Saez-Marti (2001), and impressive empirical evidence on the local persistence of cultural norms that such vertical transmission within families entails, and trust in particular (Guiso et al. 2008b, Tabellini 2008, Grosjean 2011, Nunn and Wantchekon 2012) there is still little evidence on whether this process is linear across generation or, in other words, how close social norms of children are to their *parents'*.

formal institutions are weak and markets poorly developed. In order to deal with this issue, we re-run the analysis on the subsample of people who have never moved and still live in the village where they were born. Considering the sample of non-movers also alleviates the issue that violence may not have been experienced in the village where respondents now live, which has important implications for our hypothesis regarding the different experimental treatments. Violence should have particularly negative consequences on local trust if it was experienced in the same village where victims and their potential perpetrators still live. We therefore expect the results to be stronger in the subsample of non-movers.

6. Results

6.1 Determinants of Victimization

As can be seen in Table 1, the incidence of war victimization in our sample is very high. On average, 21% of respondents declare that they have been personally injured or that a member of their household has been injured or killed as a result of the conflict. 13% of respondents report both injury and loss of life as a result of the conflict. There is a lot of regional variation (see Figure 1 and Table A2 in Supplementary Appendix). Victimization is lowest in the Pamir region, where 8.6% of households report having a family member killed and no one reports a family member injured. This contrast is due to the fact that fighting never took place within Pamir, and family members were killed in other areas of the country. Victimization is highest in the Gharm region. We purposefully surveyed respondents in the Rasht Valley, an opposition stronghold where fighting was intense. 47% of respondents in this region report loss of life or injury in their household.

Table 2 displays the results of regressions where our victimization indicators are regressed on a number of individual characteristics, controlling for village fixed effects. The region where the respondent lived in 1992 is the strongest and most robust predictor of violence. As expected, victimization is positively associated with age, although the relationship is statistically weak. Education is also positively and significantly associated with victimization. To explore in more details the relationship between education and victimization, we restrict the sample to the subset of individuals who were 25 and older in 1992 (Columns 2 and 4), as their education levels were then predetermined and could not have been affected by the

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conflict. Results on this subsample confirm education is positively associated with victimization,[12] potentially leading to an upward endogeneity bias in our results. If more pro-market and pro-social individuals were systematically targeted (see footnote 10), this will bias upward the relationship between victimization and pro-market behavior and preferences. However, our main results point to a negative relationship between market orientation and victimization. Absent such correlation between education and victimization, one may thus expect the main relationship discussed in this paper to be even stronger. Membership of a family member to the communist party is negatively associated with victimization, but the relationship is not very robust. Displacement under communist rule is not associated with victimization. Income, proxied by the household position in terciles of the income distribution, is never significantly associated with victimization.[13] In all regressions to follow, the region where the respondent lived at the onset of conflict, education and communist party membership of household members are controlled for. We also control for all characteristics that are unlikely to have changed as a result of the war, such as age, ethnicity and gender.

6.2. Experimental Results

6.2.1. Main Experimental Results

The main hypothesis we want to test in this paper is that civil war related violence hampers trust and, in particular, opens a gap between individual trust towards different groups. It is already apparent from the descriptive statistics displayed in Figure 2 that war victimization has a differential effect across the two treatments. Victimization is associated with a much lower amount sent to someone in the same village, and, if anything, a larger amount towards someone living in a different village. The differential effect of the treatments among victims

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[12] This result could be explained by "guns or butter" models of conflict as a choice between production and appropriation, which suggest that the probability of victimization is linked to the resources of potential victims (Haavelmo 1954; Grossman and King 1995). If more educated people had more resources to be expropriated or were the object of envy, they might have been targeted during the conflict. In contradiction with this explanation however, the relationship between income and victimization is not robust and if anything, is negative. Another explanation for the relationship between education and victimization has to do with theories of political participation. Higher levels of education generate expectations, which, if unmet, can induce participation in demonstrations. These ideas have been popularized as the J-Curve theory (Davies 1974). In the context of the Tajik civil war, more educated people were probably more likely to join (or be suspected of joining) the protests that ignited clashes and retaliation by government forces.
[13] Other proxies of income, such as log of per capita expenditures, lead to similar results.

is not statistically different from zero when region or village fixed effects are not controlled for. However, the results of regressions that control for village fixed effects and individual characteristics show that the effects are statistically significant.[14] Panel (a) of Table 3 displays the results for those who report injury or loss of life as a result of the conflict, panel (b) for those who report both injury and loss of life. Column 1 investigates the main effect of victimization on trust game donations. Columns 2 to 4 include an interaction term between victimization and the treatment Same Village in order to test for differential effects of victimization on trust within villages and across treatments. Columns 5 and 6 report results of regressions performed on the two treatment subsamples.

The picture emerging from the regressions is clear: war victimization destroys local trust. As expected, see Panel (a), the main effect of the Same Village treatment is positive and statistically significantly different from 0: people tend to give more to someone from their village rather than to someone outside their village, reflecting that trust is an increasing function of familiarity. However, war victims seem to trust much less their fellow village members compared with non-victims. The coefficient on the interaction between the Same Village treatment and whether the respondent reports injury or loss of life is always negative and statistically significantly different from 0 at the 5% to 10% level. The negative effect of victimization on local trust is not only statistically but also economically significant. Injury or loss of life during the civil war is associated with between 3 and 3.3 Somoni average decrease in the amount sent in the trust game to people of the same village (vs. people in a different village). The average amount sent (our measure of trust) being 9.74, this represents a 33% decrease.

The effect is even stronger, from a statistical and quantitative viewpoint, when the more intense victimization proxy is used, see Panel (b). On average, an experience of both injury and death in the family is associated with more than a 47% decrease in the amount sent by the first player in the trust game to someone from the same village, compared with individuals who did not have such a devastating experience of conflict. The coefficient on the interaction term is always statistically significantly different from 0 at the 5% level.

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[14] All results are robust to the use of region fixed effects instead of village fixed effects. Results carry through and are generally more statistically significant.

Victimization tends to be associated with larger amounts sent towards someone in a distant village, but the effect is not robust.

In an attempt to assess the economic impact of such a collapse in local trust, we retrieve the estimates of the elasticity of trade to bilateral trust from Guiso, Sapienza and Zingales (2009). Drawing an analogy between average trust of a country for another and average individual trust towards another individual in the same village, and between international trade and local trade, we estimate that victimization during the Tajik civil war entails a drop in local trade by 5.3% on average. [15]

The effect of victimization on local trust far outweighs the influence of any other individual characteristics such as age, gender, education or communist party membership, none of which has a robust effect, either on its own or interacted with the Same Village treatment. [16] In an attempt to control for altruism, which may be correlated both with victimization and with trust, Column 4 includes what the individual transferred in the dictator game as an additional control. The specification in Column 4 also includes household size as a covariate, the effect of which is never statistically significantly different from 0. Dictator game transfers are strongly and positively associated with trust. [17] The coefficient on the interaction term between victimization and Same Village treatment is robust to the inclusion of these extra controls. Actually, it is worth noting that the coefficient on the interaction term, our main variable of interest, is very stable across specifications even when a large number of additional covariates are included.

Comparisons between coefficients with no included controls and coefficients with a large number of controls provide the basis for tests that aim at gauging the importance of omitted variable bias (Altonji, Elder, and Taber 2005). The ratio of coefficients of regressions

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[15] The authors estimate that a one standard-deviation increase in the importer's trust toward the exporter raises export by 10%. In our study, our second proxy for victimization is associated with a 0.53 standard-deviation decrease in local trust.

[16] The results of regressions controlling for interaction between the Same Village treatment and all covariates are not displayed here but are available upon request.

[17] The results are not included for space economy, but the coefficient is 0.172 and is statistically significantly different from 0 at the 1% level.

including full or restricted sets of control variables[18] gives an indication of how much greater the influence of unobservable factors would need to be, relative to observable factors, to explain away the statistical effect of a variable of interest. The intuition is that the smaller the difference between the two coefficients, the less the estimate is affected by selection on observables so that the larger the selection on unobservables needs to be, relative to observables, in order to explain away the entire effect of the variables of interest. One can construct such ratios based on the comparison between the coefficient in Column 4, where all controls are include and Column 2, where no control is included. The values of the ratio for the interaction term between victimization and the Same Village dummy are about 12 in panel (a) and 152 in panel (b), making it unlikely that the inclusion of additional controls would explain away the influence of war victimization on individual behavior in the trust game.

The effect of war victimization on trust remains robust and actually acquires more significance both statistically and economically when we focus our attention to the subsamples of those younger than 14 at the onset of conflict (Column 7) and of non-movers (Column 8). In both sub-samples, either proxy of victimization is associated with a statistically significant decrease of amount sent in the Same Village treatment. Consistent with the hypothesis that violence will have more detrimental effect when victims still live around violence perpetrators, the coefficient on the interaction between victimization and the Same Village treatment is larger in the subsample of non-movers compared with the whole sample. Among non-movers, victimization is associated with a 64% to 68% decrease in the amount sent by the first mover to a partner from the same village. Victimization is also associated with a particularly large and statistically significant effect in the sample of youth. This sample is interesting in order to test additional predictions from the psychological literature concerning the malleability of preferences at different ages. In this sample, war victimization is associated with a 56% (Panel a) to 80% (Panel b) decrease in amount sent by the first mover to a partner from the same village. This corroborates the idea

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[18] The first coefficient, $\hat{\beta}^R$, is obtained when only the victimization variables are controlled for. The second, $\hat{\beta}^F$, is obtained when the full set of observable characteristics are controlled for. The ratio is calculated as: $\hat{\beta}^F / \left(\hat{\beta}^R - \hat{\beta}^F \right)$.

that traumatic events leave a larger imprint on preferences if experienced during late childhood or teenage years.

In this sample, victimization is also associated with a statistically significant increase in the Distant Village treatment, albeit by a much smaller amount and statistically significant only at the 10% level. This positive effect of trauma towards a distant other is in line with the same theoretical reasoning: it is an increase in prosociality towards an abstract fellow Tajik citizen, someone who is far removed from the context of localized intra-group violence. When a subject is asked about trusting someone living very far, the distance makes the exercise of thinking more abstract and the reply more normative. Indeed, such increased prosociality towards abstract others is consistent with an increasing body of psychological evidence on the so-called "post-traumatic ---spiritual--- growth" and surprisingly altruistic behavior found in post-disaster environments (Tedeschi and Calhoun, 2004; Solnit, 2009) and in post-conflict societies who experienced a clear demarcation between friends and foes (Bauer et al. 2011; Blattman 2009; Bellows and Miguel 2009; Becchetti et al. 2011).

Figure 2 illustrates that victimization is associated with a decrease in trustworthiness (the amount returned by the second player in the trust game expressed as a percentage of amounts received and averaged over all possible amounts received) among victims in the Same Village treatment. The coefficient on our second proxy of victimization in the Same Village treatment is negative but falls just short of standard levels of statistical significance when individual characteristics and village dummies are controlled for. It is statistically significant in the sub-sample of non-movers. Regressions results are displayed in Table 4.

6.2.2. Robustness

Table A3 in Appendix shows that our results are robust to controlling for additional individual characteristics such as income, working status, marital status, family composition, whether the household is actively engaged in farming and, importantly given the religious dimension of the conflict, for religiosity. Results are not only robust, they actually become stronger as we include more control variables. For example, when amounts sent in the trust game is the dependent variable, the coefficient on our main interaction term (between same village treatment and loss of life or injury) remains significant and its magnitude actually increases by between 1.6% and 17% when the various additional controls are included. This

suggests that the possible endogeneity bias between selection into victimization and pro-social attitudes might work in our favor.

Given the concern that victimization may also be correlated with active participation in combat and that this could be the driving force behind our results, we also control for whether the respondent has actively participated in fighting during the conflict or even since the end of the conflict. The results are robust, and the magnitude of the coefficient on the interaction between same village treatment and our second measure of victimization actually increases slightly. All the effects are also robust to ordinal logit or probit specifications. Table A4 in Appendix presents the results of identical specifications in which other proxies for victimization are used: injured only, or killed only. The results are substantially the same. In addition to the results displayed in the previous tables, we found that having lost property during the war is also associated with a collapse in local trust, but the effect is statistically significant only for those who still live in the same village, suggesting that resentment at people still living in the same village is a driving factor of the results.

6.2.3. Regional Differences

Taken together, these results indicate that being more directly affected by war-related violence is associated with a lasting negative effect on trust within local communities. We hypothesize that this effect is due to infighting occurring within communities between people with competing loyalties to rival groups. To test this mechanism further, we can exploit regional differences. First, we exploit differences in local political polarization, captured by the index of political polarization based on voting participation discussed in Section 4.4.. According to our interpretation, the collapse in local trust among victims should be higher in more polarized villages. Because contemporaneous political polarization may be an outcome of the conflict, we also rely on political polarization predicted by physical distance to the Afghan and Uzbek border, two regions of active insurgency and weapons trafficking during and since the war. Second, we exploit regional differences in the nature of fighting during the civil war. Two polar opposite cases are the Pamir, where no community infighting occurred, and the region around the capital city Dushanbe, the most inter-mixed region of the country.

Columns (1) to (8) in Table 5 presents the results of our specification (2) in two subsamples defined by their level of political polarization. Villages with high (respectively low) political

polarization are those in which the standard deviation of voting participation is strictly above (respectively below) the median. The collapse in the amount sent by victims of violence as first mover to someone in the same village is statistically significant only in the most politically polarized villages. In villages with low polarization, the coefficient associated with victimization is never significant. Beyond statistical significance, the magnitude of the coefficient associated with the interaction between Same Village treatment and victimization is, on average, four times as big in villages where political polarization is high. Proceeding in a similar fashion as in Section 6.2.1., the estimates from Guiso, Sapienza and Zingales (2009) indicate that victimization during the civil war is associated with a decrease in trade by more than 13% in highly polarized villages. The effect is robust to classifying villages on the basis of polarization predicted by physical distance to Afghanistan and Uzbekistan.[19] It is also robust to using village fixed effects in Columns 3, 4, 7 and 8.

Columns (9) and (10) in Table 5 presents results of specification (2) in Dushanbe and in Pamir separately. The collapse in local trust is large and statistically significant in the Dushanbe region, but is absent in Pamir.

To conclude, we observe that regions where divisions were and still are polarizing witness a collapse in local trust among victims.

A frequent objection to experimental evidence however is that behavior in games may poorly reflect actual behavior. We therefore turn in the next subsection to more direct survey evidence on respondents' stated preferences and actual behavior. Such evidence largely corroborates the conclusions drawn from our experimental evidence.

6.3. Survey Results: Market Integration, Economic and Political Preferences

One way to overcome local trust issues is to trade only within communal groups in which the quality of every member is known. We therefore expect victims of violence in intermixed areas to be reluctant to trade with anonymous partners and to rely more on kinship ties for trading. We explore these questions using survey data.

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[19] Here, we first run a regression in which we regress our village level measure of polarization on the physical distance to Afghanistan and to the Ferghana valley and we use the predicted values to classify our villages above or below the (predicted) median. We then run independent regressions of the effect of individual victimization in high or low (predicted) polarization, controlling for village fixed effects in Columns 4 and 8.

First, we investigate directly the respondents' stated and revealed preferences about participation in impersonal exchange. Second, we investigate the strength of kinship ties versus formal impersonal institutions, particularly in situations related to trading. An important literature, in particular Greif (2000), has stressed the importance of conflict adjudication mechanisms in enforcing economic exchange. Historically, the evolution of such institutions, from a kinship and interpersonal basis to an open and impersonal one, has been associated with the "birth of impersonal exchange" (Greif 2006). Third, we investigate civil war violence as a determinant of group participation.

6.3.1. Market integration and participation

We use several dependent variables, collected through survey questions, in order to measure stated and revealed willingness to participate in impersonal exchange. Consistently with the observed decrease in the amount sent in the trust game, victims of civil war violence have a significantly lower willingness to engage in anonymous exchange. We measure such willingness by the following survey question: "When you go to the market, how important is it to buy from a seller that you know personally?", with a 4 points scale answer from "not important at all" to "essential". Regression results are displayed in Columns 1 and 2 of Table 6. The effect of conflict is positive, statistically significant and robust to the inclusion of village fixed effects and individual characteristics, signaling a decreased willingness to participate in exchange with an anonymous trader.

We also measure actual participation in markets by asking questions on the proportion of different food items purchased through market exchange vs. self-produced or procured through donations. According to this measure, those who suffered injury or loss of life in the civil war are less integrated into markets (Columns 3 and 4 of Table 6).

We observe a negative effect on integration into markets only in villages where political polarization is high (Coefficient on victimization measure: -9.39, P-value: 0.05, with usual individual controls and regional dummies), but not in villages where political polarization is low high (Coefficient on victimization measure: -1.65, P-value: 0.69) or in Pamir, the region that did not suffer from infighting (Coefficient on victimization measure: -7.5, P-value: 0.42).

6.3.2. Kinship vs. rule of law

Several survey questions aim at capturing the strength of clannishness and kinship ties. We included a question that measures to what extent, when facing a conflict situation, respondents turn to legal and formal institutions – the police or village leader - or to their kin in order adjudicate conflict. We are particularly interested in conflict that may arise in the context of credit and exchange, and we probe about recourses in three potential situations: (i) the respondent "lent money to someone who does not repay", (ii) he/she "sold a good to someone who refuses to pay, or (iii) "someone knowingly sold him/her a defective good". We build an index that reflects the number of times the respondent would turn to his/her relatives, as opposed to the police or village leader, in order to solve such conflict. We then regress this index on war experiences. Results are displayed in Columns 5 and 6 of Table 6. Our first measure of victimization, *Injured or Killed*, is positively and significantly associated with the probability of turning towards kin in order to solve conflict related to credit and exchange, suggesting a reinforcement of kinship ties. Accordingly, civil war victims are also less likely to support the statement that "If someone has information that may help justice be done, generally he or she should report it to the police" (Columns 7 and 8).

The third variable that we use to measure the strength of kinship ties is the respondent's opinion about freedom to marry. As stressed by Greif (2006), restricted and consanguineous marriages have historically provided one means of creating and maintaining kinship groups. We ask in the survey whether the respondent supports freedom to marry or rather thinks it is best for parents to choose a spouse for their children. We regress a dummy variable that takes value 1 if the respondent supports freedom to marry on war experiences. Results are displayed in Columns 9 and 10. War experience is associated with a decrease in the support for free marriage, even when we control for whether the respondent herself married freely.

6.3.3. Participation in groups

Several survey questions aim at capturing participation in groups and associations. First, we ask respondents whether they participated in any community meetings during the week preceding our team's visit. Second, we build an index variable that sums the number of groups and associations the respondents belong to. We ask about a variety of groups, such as mosque and religious organizations, NGOs, neighborhood groups, labor unions, fraternal groups and youth associations. This index takes values from 0 to 5. Group participation is low on average in our sample, which is consistent with the literature documenting evidence

of low levels of civil society development in post-Soviet Republics (Howard 2003). The mean of the group participation index is 0.79. 40% of respondents do not participate in any group. However, civil war experience is significantly and positively associated with group participation. Regression results are displayed in Columns 1 to 6 of Table 7. War victims are also more likely to have attended community meetings (Columns 1 and 2 of Table 7). This mirrors the result found by an emerging literature that finds a link between civil war and local collective action, namely by Bellows and Miguel (2009) in the case of Sierra Leone.

Group membership and civic participation have been widely used in the literature as measures of social capital and, as such, associated with positive development outcomes (for a recent review see Guiso, Sapienza and Zingales 2010). However, this acceptation of social capital may also have negative connotation if it leads to the exclusion of outsiders (Bourdieu 1985; Portes 1998). Our results may just highlight such potential negative implication since group participation among war victims is actually associated with a *decrease* in trust as measured by the trust game. Results are displayed in Table 8. The variable of interest is an interaction between the Same Village treatment, a dummy that indicates group participation and our victimization proxies. The coefficient of this interaction term is negative and statistically significant, indicating that those who participate in groups but are victims of the civil war send less to their fellow villagers in the trust game. Such evidence is consistent with our previous results that civil war victimization is associated with a reinforcement of clannishness and kinship ties. Participation in groups in this case may not be taken as an indication of inclusive social capital but rather as a sign of victims folding back towards exclusive groups (or "bonding" social capital rather than "bridging" social capital).

We also investigate which particular group or association war victims are more likely to join. It is mainly religious groups and, to a lesser extent, labor unions that receive a boost in membership among war victims (see Table A5 in Appendix). The effect is not significant for any other group. In Tajikistan, participation in religious groups may be perceived as a form of opposition to the government. As a matter of fact, in a companion paper, we find that both war veterans and those who participated in fighting since the peace agreement are also significantly more likely to be members of a Mosque and religious groups (Cassar, Grosjean and Whitt 2011).

6.3.4. Comparison with data collected immediately prior to the end the conflict

A potential concern is that our results may be driven by post-war experiences, since our data collection takes place more than 10 years after the end of the conflict. In November-December 1996, six months before the signing of peace accords ending the Tajik Civil War, the International Foundation for Electoral Systems (IFES) completed a comprehensive nationwide survey of 1,500 adults on their views of democracy, support for free markets, national identity, and other salient issues. We compare results from the IFES data against our 2010 survey to rule out the possibility that our results are driven by Tajikistan's post-war environment rather than exposure to violence during the conflict. Many of the questions we ask in our 2010 survey are similar or identical to the 1996 IFES study, especially on exposure to violence. Results are displayed in Table 9. Already in 1996, people who had a family member injured or killed are less likely to support a market economy, are more reliant on clan-based loyalties, and more likely engage in collective action.

7. Conclusions

This paper discusses the results of a study designed to investigate the effects of civil war related violence on cooperative, market-oriented social norms and preferences. Much of the literature on trust and social capital highlights that social trust can solve for the cooperation and coordination problems implied by interpersonal exchange (Durlauf and Fafchamps 2004; Fehr, Hoff and Kshetramade 2008). When it comes to understanding the effect that war has on institutions and the economy in general, the literature points to a complex scenario of negative as well as surprisingly positive effects. Among the positive, high collective action and voting might increase social capital in the form of group and association participation. Alternatively, wars could be potentially devastating because they undermine both the institutional framework of the state as well as the social fabric for cooperation.

To contribute to this literature, we collected experimental evidence and survey data on trust, trustworthiness and economic preferences for 426 randomly selected subjects in different regions of Tajikistan. Our results show that, 13 years after the civil war ended, inflicted violence has undermined social trust at the village level, eroded support for market liberalization and democratic reform and reinforced reliance on kinship groups. At the same time, victims participate more in community meetings, associations and religious groups, but

we find this increase in collective action associated with a further erosion of local trust, indicating that the kind of social capital that gets enhanced in the aftermath of a civil war might not be the inclusive type which is capable of supporting market development, but the kin-, network-based one that may actually hinder the emergence of efficient, impersonal markets.

A key insight of our paper, taken together with the emerging literature on the behavioral legacy of conflict in other contexts, is that the long-term effect of conflict will likely depend on its specificity. If violence is of a nature that exacerbates the risks and uncertainties of social exchange, the consequences for market development may be dire. We conjecture that the nature of fighting in the Tajik civil war, characterized by localized intra-group conflict and the inability to apply basic cues to identify friends or foe has led to long lasting disruption of norms and preferences that sustain impersonal exchange and has created long-term challenges to institution building. Rather than serving as a catalyst for market supporting institutions, in cases where civil conflict undermines basic foundations for social cooperation, it also increases the likelihood that those societies will fail to make significant progress on economic development, which in turn may lead to recurrent violence.

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TABLES

Table 1: Summary Statistics

Variables	Description	Obs	Mean	S.d.	Min	Max
Victimization						
Injured or Killed	Respondent or household member injured during war	426	0.21	0.41	0	1
Injured & Killed	HH member killed & self or HH member injured during war	426	0.13	0.34	0	1
Injured	HH member or self injured during war	426	0.16	0.37	0	1
Killed	HH member killed during war	426	0.19	0.39	0	1
Experimental data:						
Offer Trust Game	Amount sent trust game (0, 5, 10, 15, 20)	426	9.74	6.97	0	20
Offer Dictator Game	Amount sent dictator game (0, 10, 20, 30, 40)	426	10.3	9.69	0	40
Same village	Same Village treatment	426	0.46	0.5	0	1
Survey data:						
Importance knowing trader personally	Scale: not important at all (0) to very important/essential (4)	424	1.82	1.03	1	4
Market integration	Percentage of food (grains, vegetables and meat) purchased through markets (as opposed to bartered or produced)	423	76.89	23.96	0	100
Freedom in economy	1 if agree or strongly agree to: "We are more likely to have a healthy economy if the government allows more freedom for individuals to do as they wish"	407	0.55	0.5	0	1
Favor market economy	1 if "market economy is preferable to any other form of economic system"	421	0.55	0.5	0	1
Community meeting	1 if attended community meetings last month	412	0.37	0.48	0	1
Part. groups and assoc.	Sum of dummies=1 if respondent member of: mosque/religious group, NGO, neighborhood group, fraternal group and youth association	410	0.79	0.92	0	5
Member mosque	1 if member mosque/religious group	344	0.33	0.47	0	1
Turn to relatives if cheated in markets	1 if turn to relatives first in either situation: not repaid for loan, sold a good and was not paid, was sold a defective good	426	0.14	0.39	0	2
Should report info to police	1 if agree or strongly agree to: "If someone has information that may help justice be done, generally he or she should report it to the police"	404	0.47	0.5	0	1
Support freedom to marry	1 if favors personal freedom to marry rather than parents choosing spouse for their children	399	0.81	0.39	0	1
Controls						
Age		419	39.8	13.5	17	77
Gender	1 if male	422	0.29	0.46	0	1
Any CP	1 if either respondent, her mother, father or other HH member member of Communist party	426	0.09	0.29	0	1
Displaced communist reg.	1 if either respondent, her mother, father or other HH member member was displaced under Communist rule	416	0.02	0.13	0	1
HH size	Household size	423	5.81	2.14	1	12
	No education	422	0.06	0.23	0	1
Comp. education	Highest education level: compulsory education	422	0.68	0.47	0	1
Second education	Highest education level: secondary education	422	0.12	0.32	0	1
Higher education	Highest education level: higher education	422	0.14	0.35	0	1
	Highest education level: post graduate					
Uzbek	Uzbek ethnicity	426	0.05	0.21	0	1
Region lived in 1992:						
Pamir		426	0.19	0.39	0	1
Dushanbe		426	0.23	0.42	0	1
Gharm		426	0.2	0.4	0	1
Khatlon		426	0.38	0.49	0	1

Table 2: Determinants of Victimization

OLS Estimates	(1)	(2)	(3)	(4)
Dependent Variable:	Injured or Killed		Injured & Killed	
Sample:	whole sample	>25 at onset of conflict	whole sample	>25 at onset of conflict
Age	0.001	0.006	0.001	0.005
	[0.365]	[0.077]	[0.620]	[0.134]
Gender	-0.010	-0.025	0.051	0.026
	[0.808]	[0.678]	[0.148]	[0.634]
Region in 1992:				
Dushanbe	0.919	0.847	0.033	0.042
	[0.000]	[0.000]	[0.536]	[0.630]
Gharm	1.301	1.276	0.323	0.461
	[0.000]	[0.000]	[0.005]	[0.026]
Khatlon	0.912	0.744	-0.056	-0.112
	[0.000]	[0.001]	[0.525]	[0.467]
Any family member	-0.019	0.074	-0.040	-0.166
Communist Party	[0.785]	[0.586]	[0.456]	[0.062]
Displaced Communist reg.	0.190	0.174	0.110	-0.014
	[0.210]	[0.295]	[0.327]	[0.844]
Uzbek ethnicity	-0.080	-0.142	0.009	-0.002
	[0.205]	[0.281]	[0.724]	[0.979]
HH size	0.008	0.019	0.005	0.016
	[0.448]	[0.206]	[0.527]	[0.235]
Comp. edu.	0.250	0.339	0.149	0.225
	[0.003]	[0.008]	[0.069]	[0.037]
Secondary edu.	0.345	0.473	0.150	0.309
	[0.001]	[0.002]	[0.113]	[0.035]
Higher edu.	0.204	0.360	0.103	0.183
	[0.030]	[0.017]	[0.237]	[0.133]
Mid income	-0.040	-0.024	-0.042	-0.073
	[0.421]	[0.769]	[0.332]	[0.316]
Rich	-0.007	-0.024	-0.025	0.001
	[0.886]	[0.769]	[0.534]	[0.994]
FE	village	village	village	village
Observations	408	154	408	154
R-squared	0.29	0.41	0.28	0.39
Mean Dep. Var.	0.217	0.205	0.133	0.124

Notes: P-values in brakets (robust standard errors). All regressions with a constant. For a description of the variables, see Table 1. Columns 2 and 4: sample restricted to respondents 25 or older in 1992 (43 and older today). Excluded 1992 region is Pamir, excluded education is: compulsory education not completed, excluded income is poor (lower third of the income distribution). Number of villages: 17

Table 3: Trust Regression Results

OLS Estimates

Dependent variable: Amount sent by first mover in the trust game

Panel a.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Sub-sample:			
					Distant Village	Same Village	14 or Younger 1992	Never moved
Injured or Killed	0.639	1.586	2.014	1.562	1.439	-1.314	3.982	1.586
	[0.491]	[0.139]	[0.073]	[0.167]	[0.213]	[0.378]	[0.077]	[0.378]
Same Village	1.412	2.612	2.225	2.646			3.008	3.527
	[0.101]	[0.006]	[0.020]	[0.005]			[0.085]	[0.021]
Same Vill. * Inj. or Kill.		-2.975	-3.281	-3.248			-5.547	-6.912
		[0.083]	[0.061]	[0.061]			[0.069]	[0.007]
Age	0.012	0.016	0.013	0.021	0.017	0.016	0.011	0.023
	[0.651]	[0.548]	[0.627]	[0.445]	[0.630]	[0.690]	[0.937]	[0.589]
Gender	-0.798	-0.491	-0.733	-0.615	-3.180	1.245	0.174	-0.855
	[0.293]	[0.510]	[0.332]	[0.410]	[0.001]	[0.298]	[0.888]	[0.419]
Individual controls	yes	no	yes	yes	yes	yes	yes	yes
Additional controls	no	no	no	yes	no	no	no	no
FE	village	village	village	village	village	village	village	village
Observations	413	415	413	413	221	192	148	196
R-squared	0.115	0.094	0.123	0.168	0.193	0.225	0.242	0.184

Panel b.	(1)	(2)	(3)	(4)	Distant Village	Same Village	14 or Younger 1992	Never moved
Injured & Killed	-0.020	1.275	1.877	1.342	1.467	-3.472	4.725	0.946
	[0.986]	[0.309]	[0.144]	[0.296]	[0.275]	[0.065]	[0.072]	[0.597]
Same Village	1.382	2.608	2.207	2.605			2.698	3.121
	[0.108]	[0.004]	[0.016]	[0.004]			[0.099]	[0.030]
Same Vill. * Inj. & Kill.		-4.523	-4.813	-4.553			-7.893	-6.467
		[0.035]	[0.026]	[0.036]			[0.038]	[0.023]
Age	0.013	0.013	0.009	0.017	0.014	0.011	0.036	0.018
	[0.623]	[0.621]	[0.727]	[0.527]	[0.687]	[0.779]	[0.790]	[0.669]
Gender	-0.808	-0.505	-0.750	-0.607	-3.284	1.349	0.273	-1.087
	[0.291]	[0.499]	[0.323]	[0.418]	[0.001]	[0.258]	[0.830]	[0.302]
Individual controls	yes	no	yes	yes	yes	yes	yes	yes
Additional controls	no	no	no	yes	no	no	no	no
FE	village	village	village	village	village	village	village	village
Observations	413	415	413	413	221	192	148	196
R-squared	0.114	0.098	0.126	0.172	0.192	0.237	0.246	0.177
Mean dep. var.			9.740		9.035	10.56	9.866	10.05

Notes: P-values in brakets (robust standard errors). All regressions include a constant.

Number of villages: 17

Individual controls: former communist in HH, education, ethnicity, region where lived in 1992

Additional controls in Column (4) are Dictator Game giving and household size

Table 4: Trustworthiness Regression Results

OLS Estimates

Dependent variable: Amount returned by second mover in the trust game (expressed as percentage)

Panel a.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Sub-sample:			
					Distant Village	Same Village	14 or Younger 1992	Never moved
Injured or Killed	-0.538	1.293	1.884	0.017	-0.282	-2.596	-2.733	-1.491
	[0.857]	[0.734]	[0.624]	[0.996]	[0.945]	[0.569]	[0.671]	[0.818]
Same Village	-1.904	0.747	-0.472	1.254			-3.400	1.011
	[0.464]	[0.794]	[0.871]	[0.654]			[0.530]	[0.831]
Same Vill. * Inj. or Kill.		-5.288	-5.780	-5.614			5.422	-12.377
		[0.316]	[0.270]	[0.229]			[0.535]	[0.122]
Age	-0.126	-0.118	-0.124	-0.090	-0.178	-0.109	-0.172	-0.091
	[0.122]	[0.138]	[0.125]	[0.262]	[0.148]	[0.287]	[0.660]	[0.446]
Gender	2.550	3.186	2.664	3.153	2.918	2.224	1.560	4.602
	[0.290]	[0.192]	[0.271]	[0.176]	[0.425]	[0.506]	[0.701]	[0.170]
Individual controls	yes	no	yes	yes	yes	yes	yes	yes
Additional controls	no	no	no	yes	no	no	no	no
FE	village	village	village	village	village	village	village	village
Observations	413	415	413	413	221	192	148	196
R-squared	0.175	0.150	0.177	0.251	0.203	0.266	0.268	0.213
Panel b.					Distant Village	Same Village	14 or Younger 1992	Never moved
Injured & Killed	0.459	2.918	4.480	2.312	2.720	-4.737	-4.621	8.086
	[0.902]	[0.555]	[0.355]	[0.605]	[0.579]	[0.347]	[0.560]	[0.194]
Same Village	-1.871	1.140	-0.121	1.489			-2.083	1.853
	[0.472]	[0.674]	[0.965]	[0.572]			[0.680]	[0.688]
Same Vill. * Inj. & Kill.		-9.406	-10.201	-9.124			1.512	-16.093
		[0.161]	[0.114]	[0.120]			[0.880]	[0.060]
Age	-0.127	-0.126	-0.135	-0.101	-0.182	-0.117	-0.153	-0.131
	[0.117]	[0.113]	[0.095]	[0.208]	[0.143]	[0.249]	[0.698]	[0.260]
Gender	2.539	3.190	2.662	3.242	2.849	2.380	2.047	4.288
	[0.292]	[0.189]	[0.270]	[0.164]	[0.432]	[0.477]	[0.618]	[0.190]
Individual controls	yes	no	yes	yes	yes	yes	yes	yes
Additional controls	no	no	no	yes	no	no	no	no
FE	village	village	village	village	village	village	village	village
Observations	413	415	413	413	221	192	148	196
R-squared	0.175	0.152	0.180	0.252	0.204	0.268	0.268	0.211
Mean dep. var.			37.685		37.477	37.92	37.356	38.792

Notes: P-values in brakets (robust standard errors). All regressions include a constant.

Number of villages: 17

Individual controls: former communist in HH, education, ethnicity, region where lived in 1992

Additional controls in Column (4) are Dictator Game giving and household size

Table 5: Trust Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent variable: Amount sent by first mover in the trust game										
Sample	High Political Polarization (above median)				Low Political Polarization (below median)				Dushanbe region	Pamir region
Polarization measure	Actual	Predicted	Actual	Predicted	Actual	Predicted	Actual	Predicted	NA	NA
Victimization (i)	1.652	5.797	1.754	5.425	0.808	-0.250	1.775	0.360	-0.010	1.399
	[0.547]	[0.015]	[0.536]	[0.051]	[0.610]	[0.874]	[0.237]	[0.807]	[0.996]	[0.674]
Same Village	3.601	3.209	3.308	4.101	1.753	1.116	1.830	0.629	-3.367	2.905
	[0.000]	[0.014]	[0.040]	[0.007]	[0.133]	[0.256]	[0.114]	[0.583]	[0.133]	[0.309]
Same Vill. * Victimization	-9.048	-7.466	-9.027	-8.163	-1.876	-2.804	-2.811	-2.829	-8.293	-2.988
	[0.014]	[0.053]	[0.017]	[0.043]	[0.488]	[0.272]	[0.284]	[0.279]	[0.007]	[0.570]
Inidvidual controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Regional FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Village FE	no	no	yes	yes	no	no	yes	yes	yes	yes
Observations	183	192	183	192	230	221	230	221	75	79
R-squared	0.173	0.099	0.186	0.135	0.035	0.094	0.098	0.166	0.457	0.200

Notes: P-values in brakets (robust standard errors). All regressions include a constant. Individual controls: former communist in HH, education, ethnicity, region where lived in 1992. In Column (1) to (8): victimization measure is Injured and Killed. In Columns (9) and (10): victimization measure is Loss of life since all reported victimization in Pamir consists of deaths rather than injuries. Results in Column (9) are robust to using Injured & Killed as a victimization measure (Coefficient on the main effect of victimization: -1.407, P-value: 0.124. Coefficient on the interaction term: -6.885, P-value: 0.011).

Table 6: Market participation, Trade Conflict Adjudication and Kinship Ties

OLS Estimates or Probit marginal effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variable:	Importance of knowing trader personally		Food purchased on markets (% of consumption)		Turn to relatives if cheated in markets		Should report information to police		Support freedom to marry	
Injured or Killed	0.600		-10.864		0.121		-0.395		-0.072	
	[0.000]		[0.001]		[0.006]		[0.000]		[0.034]	
Injured & Killed		0.438		-7.273		0.060		-0.389		-0.034
		[0.017]		[0.071]		[0.281]		[0.000]		[0.415]
Individual controls	yes	yes	yes	ext	yes	yes	yes	yes	yes	yes
FE	village	village	village	village	village	village	village	village	village	village
Observations	413	413	412	412	351	351	394	394	327	327
R2 or pseudo R2	0.181	0.154	0.287	0.270	0.066	0.049	0.098	0.076	0.549	0.543
Mean dep. var.	1.80		0.55		0.13		0.46		0.81	
Estimation method	OLS		OLS		Probit		Probit		Probit	

Notes: P-values in brakets (robust standard errors). All regressions include a constant. Number of villages: 17.

In columns (5) to (10): marginal effects computed with Delta method. Individual controls: former communist in HH, education, ethnicity,

region where lived in 1992. In column (9) and (10): whether respondent him/herself married freely as additional control.

Table 7: Participation in groups

OLS Estimates or Probit marginal effects	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Community meetings		Participation in groups and associations		Mosque member or religious group	
Injured or Killed	0.548 [0.000]		0.297 [0.000]		0.404 [0.000]	
Injured and Killed		0.411 [0.000]		0.206 [0.002]		0.347 [0.000]
Individual controls	yes	yes	yes	yes	yes	yes
FE	village	village	village	village	village	village
Observations	399	399	402	402	308	308
R2 or pseudo R2	0.289	0.263	0.184	0.153	0.232	0.173
Mean dep. var.	0.38		0.79		0.33	
Estimation method	OLS		Probit		Probit	

Notes: P-values in brakets (robust standard errors). All regressions include a constant. Number of villages: 17

In columns (3) to (6): marginal effects computed with Delta method

Individual controls: former communist in HH, education, ethnicity, region where lived in 1992

Table 8: Participation in Groups, War Experience and Trust

OLS regression

Dependent variable: Amount sent by first mover in the trust game

Measure of victimization	(1)	(2)	(3)	(4)	(5)	(6)
		Injured or Killed			Injured and Killed	
Victimization	0.885	2.386	-3.079	0.115	2.011	-5.306
	[0.351]	[0.038]	[0.067]	[0.920]	[0.125]	[0.000]
Same Village	1.175	1.435	1.229	1.148	1.435	1.226
	[0.178]	[0.184]	[0.257]	[0.188]	[0.177]	[0.249]
Participation in groups and assoc.	-0.315	-0.667	-0.892	-0.229	-0.505	-0.642
	[0.423]	[0.164]	[0.071]	[0.554]	[0.279]	[0.170]
Same Vill. * Inj. and Kill.		-3.541	2.536		-4.868	5.555
		[0.045]	[0.484]		[0.026]	[0.153]
Same Vill. *Part. Groups		0.994	1.217		0.898	1.177
		[0.206]	[0.133]		[0.248]	[0.133]
Part. Groups * Inj. and Kill.			6.141			7.974
			[0.001]			[0.000]
Same Vill. * Part. Groups * Inj. and Kill.			-6.808			-11.899
			[0.086]			[0.007]
Individual controls	yes	yes	yes	yes	yes	yes
FE	village	village	village	village	village	village
Observations	399	399	399	399	399	399
R-squared	0.115	0.127	0.135	0.114	0.128	0.139

Notes: P-values in brakets (robust standard errors). All regressions include a constant. Number of villages: 17

Individual controls: former communist in HH, education, ethnicity, region where lived in 1992.

Table 9: War experience, attitudes to market economy, strength of kinship ties and participation in groups - Results from a 1996 Survey

Probit regression - Marginal effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Market economy benefits few or no people (1 if respondent declares that a market economy benefits "few" or "no people", 0 if "most people")		Clan leader is most trusted leader (1 if clan leader most trusted among list of officials and figures)		Respondent member of a clan (1 if yes)		Member of charity or educational group (1 if member)		Attended mosque last week (1 if attended)	
Injured or Killed	0.123	0.115	0.092	0.093	0.055	0.065	0.172	0.148	0.032	0.043
	[0.006]	[0.011]	[0.016]	[0.015]	[0.203]	[0.117]	[0.000]	[0.000]	[0.265]	[0.132]
Female	0.017	0.003	-0.034	-0.023	-0.068	-0.073	-0.059	-0.022	-0.214	-0.236
	[0.485]	[0.898]	[0.129]	[0.329]	[0.002]	[0.002]	[0.013]	[0.394]	[0.000]	[0.000]
Regional dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Individual controls	no	yes	no	yes	no	yes	no	yes	no	yes
Observations	1,500	1,497	1,500	1,496	1,353	1,351	1,500	1,500	1,366	1,359
Pseudo R-squared	0.022	0.043	0.023	0.042	0.118	0.145	0.026	0.072	0.126	0.190
Mean dep. var.	0.65		0.25		0.74		0.35		0.15	

Robust standard errors .P-values in brackets. Marginal effects computed with Delta method.

Regional dummies: Dushanbe, Pamir, Kulyab, Kurgan-Tyube, Leninabad, Region of Republican Subordination.

Extended controls are: education, ses, employment categories. The survey does not contain age information. Source of data: 1996 IFES
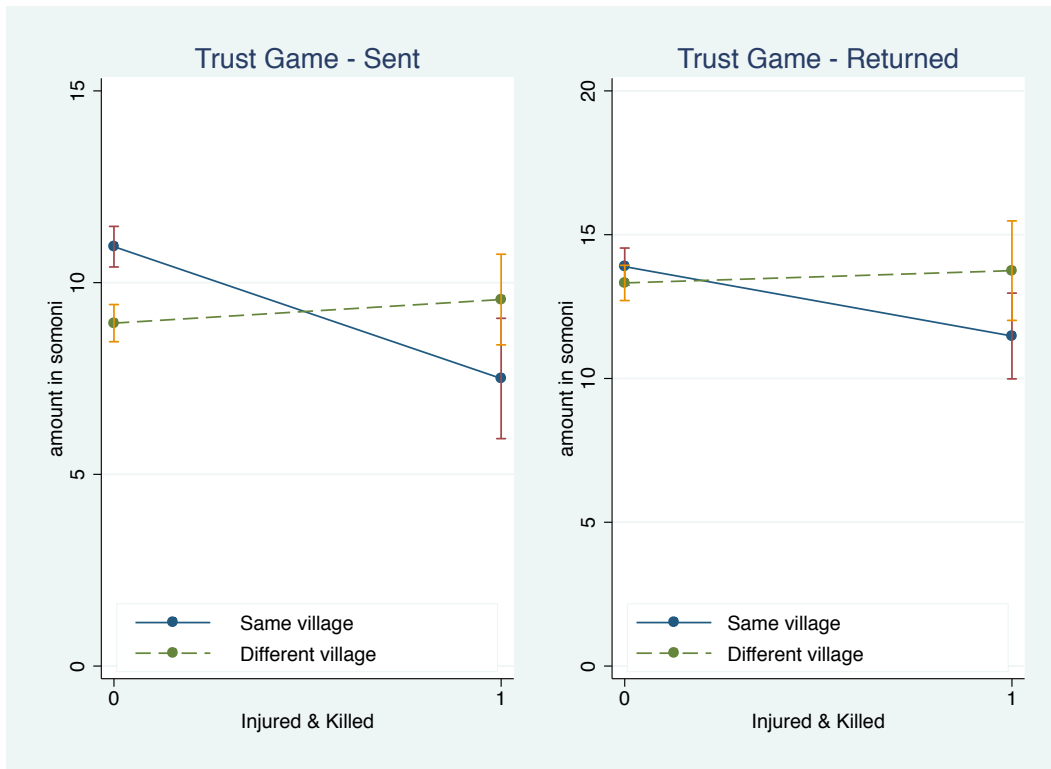
FIGURES

Figure 1: Map of victimization and surveyed villages. Intensity of civil war violence:

Notes: Proportion of respondents in our sample affected by conflict (*Injured or Killed*). Map based on respondents' location in 2010.

Figure 2: Trust Game: Amount Sent and Returned in the Trust Game

Notes: Trust game results – no controls included. Vertical bars indicate standard errors.