Essays on Violent Conflict and Informal Institutions

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Dedicated to my affectionate parents for their love and support

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Abstract

This dissertation consists of three independent essays on violent conflict and informal institutions.

The first essay seeks to investigate the institutional legacy of violent conflict in terms of trust, participation, and cooperation that took place in the district Swat of Khyber Pakhtunkhwa (KP), Pakistan. To study the causal impact, district Buner – the neighboring district is identified as a control group. The study collects institutional information from 400 households in the two districts and applies the Ordinary Least Square (OLS) and Spatial Regression Discontinuity Design (SRDD) estimation techniques. The OLS results about trust suggest that exposure to violence adversely affects out-group trust and trust on government organizations, however, positively causes the within-group trust and trust on non-government organizations. Similarly, violence stimulates participation in social organizations, participation in political activities, and participation in non-government organizations, yet, impedes participation in formal government structure. Finally, the occurrence of violence enhances within-group cooperation, collective solution to problems, and cooperation with non-government organizations, yet, lowers cooperation with government organizations. Furthermore, supporting the OLS findings, the SRDD estimates report the heterogeneous impact of violent shock, i.e., the intensity of shock varies across location of the individuals. Alternatively, the individuals in highly exposed area exhibit comparatively high changes in trust, participation, and cooperation as compare to moderately and least affected individuals in the district.

The second essay inquires the shift in religious preferences to the violent conflict. The study considers various dimensions of religious preferences, such as basic rituals, religious humanistic values, and various forms of religious trust, participation and cooperation. Like the first essay, this study uses the same control region, data collection procedure and econometric methodologies. The OLS results propose that exposure to violence strengthens fundamental rituals and religious humanistic values. However, such exposure lowers the trust on religious seminaries, religious figures and religious organizations, yet, raises trust on welfare religious organizations. Similarly, the exposure to violence adversely causes the participation in religious ceremonies and religious organizations, however, encourages participation in welfare religious organizations. Finally, the occurrence of violent shock retards cooperation with

religious organizations, nonetheless, encourages cooperation with welfare religious organizations. Additionally, the SRDD estimates support the OLS findings, yet, predict that heterogeneous impact of violent shock exists, i.e., individuals in highly exposed areas exhibit comparatively high changes in religious preferences as compared to moderately and least affected individuals in the district.

The third essay investigates the impact of violent shock on the structure of informal justice system. This study follows the earlier essays approach. The OLS findings suggest that the occurrence of violent shock strengthens the structure of informal justice system. Where, the mechanism for this change is observed a fall in the level of trust on ordered institutions. Additionally, the SRDD estimates confirm that the intensity of change in the structure of informal justice institutions varies across the location of the individuals. Alternatively, the informal justice institution relatively more strengthens in the regions that remain highly exposed to the conflict as compared to the moderately as well as least affected areas.

Introduction

"Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence, they structure incentives in human exchange, whether political, social or economic" (North, 1990, p. 3).[1] Institutions are classified into: (a) formal and (b) informal institutions. The formal institutions are the written rules such as a constitution and laws, regulations, contracts, property rights, political system and markets exchange. While, the informal institutions are socially shared rules, usually unwritten. The informal institutions include norms, ethics, taboos, customs, religious beliefs, and ideologies.

Between the two set of institutions, the informal rules are, self-enforcing, stable, learned through socialization, and depict agents' best response to each other in society. Usually, the informal institutions are hypothesized the residual category, meaning that they are explicitly applicable to any behavior which makes a departure from or not accounts for by the formal rules. The effectiveness of the formal institutions is greatly dependent on the existing structure of informal institutions. Informal institutions shape the outcomes of formal institutions by formulating and strengthening incentives comply with formal institutions.

The role of Institutions could hardly be denied. There is broad consensus in literature that institutions can necessarily account for long run differences in economic development (North, 1987, 1990; Acemoglu *et al.*, 2001, 2005; Acemoglu and Robinson, 2005, 2010). Admittedly, the institutional outlook of economic development negate geography, ignorance, culture and integration (trade) hypothesis.[2] This view

[1] North's definition discusses three important features about institutions: (1) institutions are "humanly devised"; (2) "they are the rules of the game" imposing "restriction" on human behavior and (3) their effect channelized through the "incentive structure".

[2] For detail discussion review Acemoglu and Robinson (2013) and Rodrik et al., (2004).

explicitly asserts, that institutions trump all others-i.e., institutions sufficiently explain the growth pattern. Unfortunately, the complexity to describe and precise informal institutions, the development discourse of institutional prospective inclined towards formal structure. Nevertheless, if formal structure matter, informal matter too and even the later seems to perform a more crucial role for the functioning of an economy. It is generally conjectured that disparities within countries' development, endow with homogenous formal institutions, attributed to heterogeneity in informal rules (Voigt, 2013).

Undeniably, institutions are believed to be highly persistent and path dependent, particularly the informal institutions. As once created, an institutional structure persists for a longer time, and the gradual changes take place only as a part of a wider process of social evolution (Klauer *et al.,* 2016).[3] Despite, they are observed endogenous to various shocks (Austin, 2008). Considering the endogenous structure of institutions, in this thesis we probe the institutional change in response to the violent conflict that surge in the District Swat of Khyber Pakhtunkhwa (KP) (formerly the North-West Frontier Province or NWFP), Pakistan.

Though, the social and institutional aftermaths are the most vital, unfortunately, the least comprehended part of all the warfare (Blattman and Miguel, 2010; Bateson, 2015). This thesis consists of three independent essays on the overarching theme of violent conflict and informal institutions. In first essay, we choose different local informal institutions, including trust, participation, and cooperation to figure out how the new path of institutions is determined, when the underlying societal structure expose to conflict shocks. In the second essay, we inquire the changes in religious preferences

[3] A variety of evidences divulges that the controlled institutional structure introduced by the non-settler colonizers persisted even after the colonial regimes ended.

as a result of violent shock. We study that how exposure to violent conflict affect religious preferences such fundamental rituals, religious humanistic values, various form of religious trust, religious participatory preferences, and religious cooperation behavior. In the third essay, we inquire that how exposure to a violent shock affect the structure of informal justice system in a society, and what mechanism explains the transitional path. This comprehensive analysis enhances our understanding about the institutional legacies of violent conflict in case of Pakistan, which remain the most neglected part of wartime research.

The first essay analysis suggests that exposure to violence adversely affects the out-group trust and trust on government organizations, however, positively causes the within-group trust and trust on non-government organizations. Similarly, violence stimulates participation in social organizations, participation in political activities, and participation in non-government organizations, yet, impedes participation in formal government structure. Finally, the occurrence of violence enhances within-group cooperation, collective solution to problems, and cooperation with non-government organizations, yet, lowers cooperation with government organizations. However, the intensity of violent shock varies across the individuals, residing in different parts of the district. Alternatively, the individuals in highly exposed areas exhibit comparatively high changes in trust, participation, and cooperation as compare to moderate and least affected individuals in the district.

The second essay findings confirm that exposure to violence strengthens fundamental rituals and religious humanistic values. However, such exposure lowers the trust on religious seminaries, religious figures and religious organizations, yet, raises trust on welfare religious organizations. Similarly, the exposure to violence adversely causes the participation in religious ceremonies and religious organizations,

however, encourages participation in welfare religious organizations. Finally, the occurrence of violent shock retards cooperation with religious organizations, nonetheless, encourages cooperation with welfare religious organizations. Additionally, findings of the study predict that heterogeneous impact of violent shock exist. The individuals in highly exposed areas exhibit comparatively high changes in religious preferences as compared to moderately and least affected individuals in the district.

The third essay analysis suggests that the occurrence of violent shock strengthens the structure of informal justice institution. Where, the mechanism for this change is perceived a fall in the level of trust on ordered institutions. Additionally, the SRDD estimates confirm that the intensity of change in the structure of informal justice institutions varies across the location of the individuals. Alternatively, the informal justice institution relatively more strengthens in the regions that remain highly exposed to the conflict as compared to the moderately as well as least affected areas.

Chapter 1

Violent Conflict and Local Informal Institutions

1.1. Introduction

Violent conflict is one of the major causing factors of human suffering and underdevelopment.[4] Development scholars believe that violent conflicts adversely affect the economic performance by leaving dreadful legacies – from the destruction of physical capital to the disruption of human and social capital. Since conflicts have persistent adverse impacts on all the factors considered essential for economic development, consequently, they are termed as "Development in Reverse" (Collier *et al.,* 2003).[5]

Violent conflicts have trembled various countries around the world at different periods of time. Whereas, majority of the conflicts' episodes are witnessed in lower income countries because the burden of conflict disproportionately falls on the poorer economies which in turn disseminate disparities among the individuals and the level of development (Jakiela, 2015).[6] Usually, conflict spurs to lawlessness, chaos and widespread disorder by extinguishing psychological and formal sanctioning mechanism

[4] A violent conflict is a situation where at least two parties involves in using physical force against each other to resolve competing claims or interests. The internal violent conflict is the conflict that takes place within a state (Kalyvas and Balcells, 2010).

[5] In addition to the destruction of physical capital (Collier, 2003), human capital (Justino *et al.,* 2013; Leon, 2012; Collier, 2003), and mass killing (Melander et al., 2016; Staub, 2012), violent conflicts cause forced displacement (Czaika and Kis-Katos, 2009; Engel and Ibáñez, 2007), provoke income inequality (Bircan *et al.,* 2017), surge transactions cost (Bircan *et al.,* 2017; Collier, 1999), deter investment (Besley *et al.,* 2011) and increase the likelihood of future conflicts (Derouen and Bercovetich, 2008).

[6] About 1.5 billion people suffer from various violent conflicts around the world, one-third of which reside in developing economies with stern poverty (Justino, 2012).

in society. Scholars, therefore, label conflicts as a symptom of "Failed States" and "Collapsed States" (Ghani and Lockhart, 2009; Milliken and Krause, 2002).[7]

Beyond irrepressible adverse effects, conflicts are not always exclusively destructive. They could stimulate societal transition from fragile structure to creation of a nation-state, and further strengthening the existing states (Bauer *et al.,* 2016; Taylor and Botea, 2008; Tilly, 1985). Additionally, although the short-term human and economic costs of conflicts are indisputable, the empirical facts that emerged in the last decade depict that long-run effects of conflicts are ambiguous. For instance, several countries in immediate post-conflict period have experienced rapid growth recovery, which makes the notion suspicious that conflicts permanently retard growth and development (Miguel and Roland, 2011; Brakman *et al.*, 2004; Davis and Weinstein, 2002).[8] In fact, it is perceived that people who have lived through violence remained more civic-minded and politically engaged (Gáfaro *et al.,* 2014; Voors *et al.,* 2012; Blattman, 2009; Shewfelt, 2009; Bellows and Miguel, 2009, 2006), learned new skills and identities (Balcells, 2012), developed social networks (Parkinson, 2013; Wood 2010), preferred to take profitable risks (Voors *et al.,* 2012), and behaved more cooperatively and pro-socially after many year of conflict suspension (Bauer *et al.,* 2016; Voors *et al.,* 2012). These aftermaths led various researchers to submit that conflicts might be related to pro-social transformation in the long run, by providing new evidence against pessimistic views on the destructive legacies of conflict (Voors *et al.,* 2012; De Luca and Verpoorten, 2011).

[7] Nevertheless, systemically functional violence which is used to preserve social order is considered exigent. Because, no society could productively functional, if experiences the absence of efficient social order and compulsory public goods (Olson, 1993).

[8] The claim also supported by the Neo-Classical growth model which predicts rapid postwar growth convergence to steady state path, if conflicts effects are specified to the destruction of physical capital (Blattman, 2010).

With inescapable social impacts, the nature, duration, and intensity of conflict could alter the prevailing structure of institutions, particularly the inherent features of informal rules. Despite general agreement over the definition of institutions – the rules which shape human interaction; the conflict literature primarily considers the causes of onset, duration, and termination of a conflict, and has largely neglected its institutional outcomes. These institutional outcomes underpin the choices of different players in conflict, such as state actors, non-state-armed groups, and common citizens (Gáfaro *et al.*, 2014).[9] For instance, how these agents (citizens in particular) form choices, i.e. establish a new set of institutions in conflict affected zones (Arjona, 2014). Whereas, such choices are considered interdependent among groups and determined by the expected payoffs and horizons of the agents.

The formation of a new set of institutions resulting from violent conflicts ought not to be surprising at all. Conflicts interrupt the underlying social, political, and economic structure of a society, and impose a new social order. Perhaps, the conventional institutional wisdom believes that institutions are path dependent and highly persistent over an extended period of time. Nevertheless, institutions are perceived endogenous to different shocks (Austin, 2008).[10] For instance, the conflict in England changed the power trajectory from absolute monarchy to the parliamentary system (Acemoglu and Robinson, 2013). Equally true for Africa, where the conflict changed and reconstituted state's formal institutions (Aron, 2003). Similarly, in US, the conflict introduced new formal pecuniary rules for the union soldiers (Skocpol, 1992). Besides, the formation of institutions at a country level, conflict has reshaped and

[9] Usually, violent conflicts are theorized as "off the equilibrium path of political order"; rather considering them catalyst to the emergence of a new set of institutions, see also Kalyvas *et al.* (2008).

[10] Though institutions are self-enforcing in nature, yet they are not purely exogenous. Institutional change in a society occur in response to changes in people expectations (Austin, 2008).

created institutions at international level as well. For instance, the termination of World War II resulted in the creation of new inter-governmental institutions, like the International Monetary Fund (IMF) (Ikenberry, 2009). Additionally, beyond formation of formal institutions, locally based, socially embodied, and durable informal institutions have also emerged from various conflict events. For instance, the conflict in the Guatemala and Nicaragua resulted in 'Civil Patrol' and 'Sandinista Defense Committees', respectively (Bateson, 2015).[11, 12]

Institutional change, tough a complex process, however, takes place in conflict-affected zones when different armed groups (state actors and non-state) compete with each other to control the territories and inhabitants. This conflicting environment either completely destroys or transforms the structure of prevailing institutions in a region (Gáfaro *et al.,* 2014). The non-state armed groups largely influence the underlying institutional structure by imposing self-designed norms, controlling the economic bustles, and presuming the state's power (Arjona, 2010; Gutierrez Sanín and Baron, 2005).[13] Usually, to promote their agenda, non-state armed actors make coalition with local people on the basis of homogenous ideological preferences. This alliance happens because local organizations are considered important institutions, which can be used for political and economic motives during and after the conflict (Riley, 2005). Yet, to

[11] However, in various cases the inhabitants form new institutions to solve collective disputes, inforce property rights, minimize the risk of victimization and avoid market failure. For detail, discussion see also Ostrom (2015) and Gambetta (1996).

[12] Theoretically, institutions during violence develop from two different states, i.e. innovation and imposition. The innovation of institutions happens, when a society agents use their agency to create new institutions or alter the existing one (Petersen, 2001; Arjona, 2010; Kaplan, 2010). Whereas, the imposition of institutions occurs when the competing groups impose new rules on the inhabitants. For instance, the establishment of parallel courts by the non-state agents in Sri Lanka, EI Salvador, and Sierra Leone. For detail discussion, review Sivakumaran (2009).

[13] In fact, when the state institutions are weak and inappropriate, various competing actors in a society try to cover the space by imposing self-created institutions, which support their war objectives and help them in securing their future prospects (Arjona, 2010).

maintain their control, armed groups resort to violence (not in all cases, especially when they face more equipped state forces) against inhabitants (Kalyvas, 2006). In particular, they target the local leaders to replace them with their supporters (Kaplan, 2010). This strategy helps them to transform institutions in their favor, which is necessary to rule the local population (Arjona, 2014).[14] Nevertheless, the inhabitants, while confronting the armed groups have a variety of choices to reduce the risk of victimization. For instance, they could support state's organizations, or extend their support to non-state actors to ensure physical and economic protection.[15] Usually, they support non-state actors when they are ruled by an illegitimate authority prior to the conflict or when the state is weak, inadequate or abusive (Justino, 2009; Kalyvas and Kocher, 2007; Wickham-Crowley, 1992). However, among other, some inhabitants use and transform the local institutions to resist the non-state armed groups (Petersen, 2001; Arjona, 2010; Kaplan, 2010). While, others could isolate themselves from local organizations, avoid civic activities, and keep themselves limited to the family networks in order to avoid the fear of target violence (Korf, 2004; Kalyvas, 2006). The outbreak of conflict, therefore, has a profound impact on the social relations, organizational life, and collective actions of the individuals and societies that are directly exposed to violence. Hence, when a conflict hit a society, its social impacts become persistent and routinized a within community, which further stimulate change in the structure of informal institutions, individual behaviors, and norms in the region (Blattman *et al.*, 2014; Voors and Bulte, 2014).

[14] The creation of specific institutions allows the armed groups to shape the social, economic and political affairs of the area in such a way that benefit their organization in terms of recruitment and creating rents.

[15] During the outbreak of warfare in the country, majority of the inhabitants tend to rally around the flag and provide strong support to the government and military. For detail discussion see Primoratz (2005).

Surprisingly, very little attention is devoted to the institutional legacies of violent conflict. Alternatively, the social and institutional consequences of conflict are the most vital, unfortunately, the least comprehended part of all the warfare (Bateson, 2015; Blattman and Miguel, 2010). Generally, the existing informal institutions and traditions are ignored in post-conflict societies (Gizelis and Kosek, 2005). When we overlook institutional aftermaths of conflicts, we actually ignore an important dimension of life in post-conflict societies. Driven from the discussion, we probe the dynamics of institutions in response to the violent conflict that surge in the District Swat of Khyber Pakhtunkhwa (KP) (formerly the North-West Frontier Province or NWFP), Pakistan. The district witnessed a deadliest conflict when non-state actors started a movement in the valley in 2004 (which later turned into violent conflicts) to impose Sharia Laws in the region. The persistent hostility and conflict for years between the non-state armed groups and law enforcement agencies in the region resulted in the destruction of physical infrastructure, civilian casualties, and breakdown of social and institutional structure. In this study, we inquire the institutional legacy of that particular conflict to understand how the new path of institutions determine, when the social structure exposes to a conflict shock. For this purpose, we consider three different forms of informal institutions, which include: (a) Trust, (b) Participation, and (c) Cooperation.

1.1.1. Objectives of the Study

This study is based on the following specific objectives:

1. To examine how conflict affect Within-Group and Out-Group Trust and Trust on Government and Non-Government Organizations in a society.
2. To investigate how exposure to conflict affect the participatory behavior of individuals in Social Organizations, Political Activities, and Government and Non-Government Organizations in a society.

3. To investigate how conflict affect Within-Group Cooperation, Collective Problem Solution, and inhabitants' Cooperation with Government and Non-Government Organizations.

1.1.2. Significance of the Study

Since the last two decades, Pakistan is facing intense waves of conflict in various parts. These conflict shocks besides huge economic cost have trembled the social or institutional structure of the country. Whereas, such institutional effects prevail more prominent in the regions that directly exposed to conflict shocks. Undeniably, institutional structure is considered to have a significant impact on all the dimensions of life. For instance, it minimizes the transaction cost, uncertainty, and asymmetric information. Besides, it defines the rules of participation, ways of economic interactions, representation, and the inclusion of different groups in a society. However, the development discourse at micro level ignores such fundamental structure and its response to exogenous shocks like conflict. The present study examines the endogenous structure of local informal institutions, i.e., how a new set of institutions develop when a shock hit a social structure. Although, the persistent conflict shocks in the country have attracted the researchers to measure the cost of conflict. However, the researcher mainly examined the economic cost, and ignored the institutional aftermaths. The present study contributes to existing literature on conflict and its institutional aftermaths in various levels. Firstly, this study as a pioneer work in case of Pakistan explores that how violent conflict affect social structure and set a new equilibrium path of informal rules. Secondly, the existing literature on conflict and institutions considers narrow proxies of informal institutions, however, the present work contributes by analyzing the trust, participation, and cooperation in a post-conflict life in a more general and comprehensive setting. Third, this study proposes some policy recommendations to

minimize the social cost of conflict. This wide-ranging analysis of the issue enhances our understanding of the effects of conflict on local informal institutional structure.

1.1.3. Organization of the Study

This study is organized as follows: the section 1.1 discusses the introduction of the study. Section 1.2 outlines the conflict history in the valley of Swat. The section 1.3 provides the literature review. The section 1.4 presents the data, variables description, sampling technique, identification strategy, and methodology. While, the last two sections, 1.5 and 1.6 provide discussion on findings and conclusion, respectively.

1.2. Violent Conflicts in the Valley of Swat

Swat Valley is an administrative district, sprawling on an area of 5337 sq. km in the province Khyber Pakhtunkhwa (KP), Pakistan. The district has 2,309,570 populations (according to the population census, 2017) and shares borders with the districts of Malakand and Buner in the south, Upper and Lower Dir to the west, and Gilgit Baltistan and Chitral to the north. The inhabitants of the valley are mainly Pashtun tribes (dominated by the Yousafzai tribe), where their social, political and economic lives are significantly shaped by the Pashtuns' culture (Pakhtunwali code of conduct) and Islamic principles.

The conflict in the Swat Valley has a protracted history, it can be traced back to the movement 'Tehrik-e-Nifaz-e-Shariah-Mohammadi (TNSM)', started by a religious leader Sufi Mohammad Khan in 1992 (Orakzai, 2011). The TNSM gained national interest when Sufi Mohammad Khan launched an armed movement, the 'Tor-Patki' (black turban) and demanded the authorities to immediately impose Sharia's laws in the region. To impose the demands, the followers of the Sufi Mohammad Khan seized state property (airport, police station, and schools) and abducted government officials. To encounter the TNSM movement and establish the writ of the state, the government deployed armed forces (Kronstadt, 2010). However, the operation in the valley ended

after a short period of time, and the negotiations took place between the provincial government and the leaders of TNSM. As a consequence, the provincial government showed agreement on the execution of Sharia courts through the Nezam-e-Shariat Regulation. This regulation resulted in a parallel judicial system, under which supplicant had the choices to avail the traditional or the Sharia law. Nevertheless, the regulations carried out by the provincial government at that time were considered insufficient to resolve the grievances of the TNSM (Orakzai, 2011). Thus, the struggle of the movement continued even after the implementation of the regulation, which often resulted in an irregular conflict in the region (Rome, 2008).

After the US invaded Afghanistan, Sufi Muhammad Khan started a freedom fight against the US occupation. He recruited approximately more than 10,000 people from the valley to fight the US soldiers (Roggio, 2007). Nevertheless, when Pakistan became US ally in the war against terror, the government banned the TNSM and apprehended the Sufi Muhammad Khan. After his detainment, his son-in-law, Maulana Fazalullah led the movement and established a close association with militants' groups across the country to suppress the state writ in the valley. To promote his ideas, such as opposing the female education, judicial system, and the informal social structure, Fazalullah started a radio campaign in the district (Siddique, 2010). He operated more than 30 illegal FM radio stations throughout the district, which made him famous as the 'Radio Mullah'. The Fazalullah potentially shaped masses' preferences by exploiting the deteriorated formal institutional structure and providing quick rehabilitation assistance in the 2005 earthquake. However, it is important to note that 2005 earthquake also hit the neighboring district like Buner, Dir and Shangla with the same magnitude.[16]

[16] For details see also the Preliminary Damage and Needs Assessment" report on Pakistan 2005 Earthquake, jointly prepared by Asian Development Bank and World Bank.

The additional factor which exacerbated the violent struggles in the valley was the 'Lal Masjid' operation of Islamabad in 2007. In response to violent struggle of militants, the government launched a military operation in the valley. However, the initial operation failed to limit the power and presence of the militants (Siddique, 2008), as by late 2007 the militants controlled the administration of Swat.

During 2007-2009, conflicts reached the tipping point in the valley when the militants frequently attacked the security personnel, local leaders, civil society and elected representatives of government. Militants destroyed state's property; in particular, they targeted hospitals, schools and informal institutional structure (Jirgas and Hujras). They established a parallel government and introduced a new justice system as an alternative to the formal judicial system to solve the indigenous disputes and challenged the local Jirgas system. During this period the militants captured 59 villages and seized nearly 70 percent area of the valley (Orakzai, 2011).

To prevent the violence and restore the valley to normal life, the then provincial government of National Party, started peace talks with militants. In order to facilitate the negotiations, the government released Sufi Muhammad Khan (Kronstadt, 2010). In April 2008, the provincial government reached a 16-points peace agreement. But unfortunately, the accord lived for a short span of time. During the new eruption of violence, the militants gained a major control of the valley. The government attempted a new talk of peace in the presence of Sufi Muhammad, which led to the declaration of a short-term ceasefire in the valley. Subsequently, the government decided to implement Sharia Laws in the region.[17] On February 15, 2009, the government

[17] It is important to note that Sharia Laws were implemented in whole Malakand Division, which include Swat, Buner, Shangla, Upper Dir, Lower Dir, and Chitral districts. for detailed discussion see also Roggio, B. (2009) and the subsequent report https://nation.com.pk/14-Apr-2009/sharia-enforced-in-malakandand.

implemented the sharia laws in Swat via religious courts system under a Qazi, which is commonly known as the Nizam-e-Adl Regulation, 2009 (Hilali, 2009).

The peace process yet remained an incomplete dream when Sufi Muhammad Khan refused to be part of the negotiation. He asserted that government was not sincere to implement the Islamic laws in the true sense. In the mid-2009, the militants escalated their activities, this caused an armed counter-offensive against them. To encounter the militancy in the valley and restore writ, the government decided to launch operation Rah-e-Rast (The Straight Way) in 2009. The operation continued for almost two months, and all parts of the district were cleared from the militants and government writ was established. Unfortunately, the operation resulted in mass migration from the district. The UN Refugee Agency (UNHCR) and government of Pakistan reports claimed that almost 2 million people migrated because of the military operation and took asylum in the camps established by the government for Internally Displaced People (IDPs) in Peshawar, Charsadda, Nowshera, Mardan, and Swabi districts of KP. Whereas, some of the IDPs resided in public buildings like schools, relatives and friends' homes, and community buildings. However, the reports unveiled that after two months of migration, 80 to 90 percent of the citizens returned home (UNHCR, 2009).[18] Additionally, the local administration reports suggested that almost all the inhabitants of Swat have returned to their homes and living a peaceful and normal life in the valley (GOP, 2013).

1.3. Literature Review

Institutional legacies of conflict largely remain the unexplored part of wartime research. Recently, several researchers attempted to explain how various aspects of a society's

[18] For more details see also Conflict Early Recovery Initial Needs Assessment (CERINA) report. https://reliefweb.int/report/pakistan/pakistan-conflict-displaced-persons-crisis-health-cluster-bulletin-no-8.

informal institutions emerge and evolve in response to conflict shocks. This section provides an overview of the prior studies that focus on the institutional consequences of violent shocks in different parts of the world.

To investigate the aftermaths of war violence on local institutions, Gáfaro *et al.* (2014) considered the Colombian armed conflict episode. The authors, while in search of causal impact, established contiguous-pairs rural communities that shared common socioeconomic characteristics, but differed in armed groups' presence. In their inquiry, they found that highly exposed communities' individuals to violent conflicts generally increased their overall participation in the local collective organizations, specifically in the local political organizations. However, exposure to violent shock reduced the effective participation of the community members in the decision-making process in various organizations.[19] Comparable findings have been presented by Bellows and Miguel (2009 and 2006) while exploring the ruthless Sierra Leone civil war consequences. They provided suggestive evidence that those households who experienced intense conflicts with comparable no victims, largely participated in the community meetings, registered to vote, joined the local community and political groups, and contributed to the provision of the public goods. This legacy of the conflict equally observed in the post-conflict life of Uganda, where rebels' conscription significantly increased abductees' political participation in terms of casting votes, becoming a community leader and holding a political job. Yet, this treatment did not potentially alter individuals' choice regarding non-political participation (Blattman, 2009). Similarly, in post-conflict life analysis of Aceh (Indonesia), Bosnia, and Vietnam veterans in the U.S, the Shewfelt (2009) observed that those who largely

[19] In the post conflict scenario, the strengthening of the collective organization did not signify the vibrant nature of the society; rather it was the risk of victimization, which induced the individuals to be involved in local organization.

exposed to extensive wartime trauma, more significantly participated in various types of social and political activities than were those who experienced fewer wartime trauma events. Interestingly, beyond the country-specific analysis, in an extensive survey of the five continents, Bateson (2012) validated the findings of the earlier studies regarding participation, and concluded that victimization effects are so prominent in the societies that it roughly equals to an additional five to ten years of education.

Among others, Whitt and Wilson (2007) attempted to explore the aftermaths of the Bosnian civil war's episode. The authors implemented a dictator game and perceived that inter-ethnic altruism was surprisingly high following the war, suggesting that war is not all that damaging to post-war social cohesion. Elsewhere in Sierra Leone, comparable results have been documented by Cecchi *et al.* (2015), from the post-conflict behavior of the young street soccer players through experimental and observational approach. The participants in the dictator game formed anonymous choices and those young soccer players who were intensively exposed to violent conflict behaved more altruistically towards within-group players but not towards the out-group. Similarly, Bauer *et al.* (2014) designed an experimental study on the Georgian population, who were exposed to bombardments during the war with Russia. They confirmed that conflict propagates parochial altruism; those who were highly affected by the conflict were less selfish and more inequality averse towards within-group members as compared to less affected peers, however, no such effects were observed for the out-group members. Furthermore, to identify the precise causal effect of violence on cooperation, Silva and Mace (2015) designed field experiment, which considered cooperation in form of school donations and charity, during and after violent sectarian uprisings between Protestants and Catholics in Belfast, Northern Ireland. The authors confirmed that even in a very specific form of cooperation violence led to a

higher level of parochial altruism in the society, thus validating the findings of the earlier studies. In addition, to assess inhabitants post-conflict preferences in Burundi, Voors *et al.* (2012) performed a series of the behavioral game. The authors observed that nine years after the war, individuals who experienced wartime violence, not only behaved more altruistically towards society members but appeared more risk seekers, preserved higher discount rate and found largely involved in community organization than those who did not face wartime trauma. Similarly, to inquire post-war life in Nepalese society, Gilligan *et al.* (2014) implemented a dictator game and took note that during Nepal's civil war, communities' members with higher exposure to violence in civil war collectively contributed to public goods provision, exhibited a greater level of cooperation when interacted with each other, and remained more trustworthy. Interestingly, from the survey data, while tracing the institutional legacy, Voors and Bulte (2014) admitted from Burundi civil war that exposure to violence, like others, increased the parochial altruism, and enabled the local inhabitants to adopt coordinate institutional reforms that increased tenure security.

Contrary to the aforementioned literature, another bunch of recent literature adds to the more pessimistic viewpoint. Evidence from Peru's violent conflict (1980-2000) suggested that cooperative behavior might not always be the case in post-conflict societies (Malasquez, 2016). Using the information on the location of birth of multiple cohorts of individuals, the author confirmed that exposure to violence in early age significantly reduced participation in various local organizations that provided basic public goods like foods and education. In addition, the author confirmed that conflict lowered trust on public institutions like local government and electoral authorities. De Luca and Verpoorten (2011) documented analogous findings from the Ugandan conflict episode. The authors confirmed that the associational memberships and self-reported

generalized trust lowered in the districts that exposed to intense battle events. Despite these effects, the authors observed rapid recovery of social capital. Similarly, though endorsing that violent conflict in different regions of the world promoted participation in the various organization; Shewfelt (2009) in the other part of the study perceived that the advent of conflict lowered the rate of social trust in the societies. Moreover, from northern Afghanistan, using survey data, Weidmann and Zuercher (2013) failed to find support for the proposition that wartime violence led to an improvement in social cohesion. First, Cassar *et al.* (2011) enlisted from post-war Tajikistan that exposure to violence reduced fairness and trust level within the local communities, reinforced kinship based norms of morality and depressed the willingness of the victims to engage in impersonal exchange. Subsequently, Rohner *et al.* (2013), inquiring the northern Uganda's conflict consequences, acknowledged that in war-affected districts, victims exhibited the behavior of lower level of trust and reinforced ethnic identity. Similarly, considering the violent shock of Kenya, Becchetti *et al.* (2014) concluded from common pool resource games that the level of trustworthiness significantly dropped among the individuals who suffered in the 2007 Kenyan violence when playing common pool resource games with individuals from other ethnic groups. Lastly, Bozzoli *et al.* (2011), while unveiling the consequences of violent conflict on expectations, based on the survey data collected in northern Uganda in 2007, observed that timing dimension matters. The cynical expectations among the victims lived shortly after the occurrence of conflict, the optimistic expectations were observed positively link to the intensity of conflict in the distant past.

The above literature discussed three dimensions of the local informal institutions, i.e. trust, participation, and cooperation in post conflict life from various parts of the world. The literature has documented a variety and conflicting findings.

The studies like Gáfaro *et al.* (2014), Bellows and Miguel (2009 and 2006), Blattman, (2009), Shewfelt (2009), Bateson (2012), Whitt and Wilson (2007), Cecchi *et al.* (2015), Bauer *et al.* (2014), Silva and Mace (2015), Voors *et al.* (2012), Voors and Bulte (2014), and others confirmed that conflict promoted the level of participation, cooperation, and trust. However, other studies like Malasquez (2016), De Luca and Verpoorten (2011), Shewfelt (2009), Weidmann and Zuercher (2013), Cassar *et al.* (2011), Rohner *et al.* (2013), Becchetti *et al.* (2014), Bozzoli *et al.* (2011) impaired the trust, participation, and cooperation among the victims individuals.

1.4. Data, Variables, Identification Strategy, and Methodology

The core purpose of this essay is to investigate the effect of conflict on local institutions. In order to achieve the underlying objectives, this study follows the following structure.

1.4.1. Data Collection

In this study, we collect primary data on informal institutions and other relevant households characteristics through the structured questionnaire in two districts of KP, namely Swat and Buner in 2018.[20] Since, the unit of analysis is household in our study; we therefore, need to pick an appropriate sample size. To decide about the suitable sample size, we first trace the total number of households in each district. For this purpose, we use the population census report of Pakistan of 2017. According to the census estimates, the total number of households are 274620 and 94095 in Swat and Buner, respectively. Since the population size is known to us, we calculate the representative sample through the following Yamane formula:[21]

[20] We collect data in district Buner also because we keep the region as a reference category or the control group in our analysis. The identification section provides detail discussion on the selection of district Buner as a control group.

[21] The Yamane (1967) believe that the assumption of normal population is weak; therefore, the entire population should be sampled. Additionally, changing the population level, margin of error and confidence interval would yield different sample size.

$$n = {}^{N}/_{(1 + N\, e^2)}$$

Here, n is the sample size, N is the total population size (the number of households in our case), and e is the margin of error. We use the 95% confidence interval, for which we have 5% margin of error. With these values we select 400 sample of households from each district.

1.4.2. Variables Description

After specifying the appropriate sample size, we collect data on different informal institutions, like trust, participation, and cooperation. We also collect information on economic, demographic, religiosity, and residence location of the households. The following discussion outlines the description of the variables, which we use in our empirical inquiry.

1.4.2.1. Institutional Variables

1.4.2.1.1. Trust

We take various forms of trust, i.e. within-group and out-group trust, and trust on the government and non-government organizations. Additionally, each category of the trust has various sub-components. We quantify that sub-components of each category of trust by a likert scale of 1 to 4. Whereas, 1 implies individuals' preferences of no trust at all, and 4 suggests their highest level of trust. We construct each category of the trust as a mean value of its sub-components. The following discussion elucidates the sub-component of each category of trust.

i. **Within-Group Trust**

   The within-group trust is measured how often an individual trust on family members, relatives, neighborhoods, known people, and community leaders.

ii. **Out-Group Trust**

   The out-group trust is measured how often an individual trust on strange people from own and other areas.

iii. **Trust on Government Organizations**

The trust on government organizations is measured how often an individual trust on national government, provincial government, and local government or administration.

iv. **Trust on Non- Government Organizations**

The trust on non-government organizations (NGOs) is measured how often an individual trust on private organizations that work for the social betterment of the inhabitants.

1.4.2.1.2. Participation

Like trust, we take different forms of participation, i.e. participation in social organizations, participation in political activities, participation in government organizations, and participation in non-government organizations. Whereas, each category of participation has the different sub-components. We quantify the sub-components of each dimension of participation by a likert scale of 1 to 4. Whereas, 1 implies no participation of individuals in any activity and 4 suggests their highest level of participation. Additionally, we construct each of participation variable as a mean value of its sub-components.

i. **Participation in Social Organizations**

Participation in social organizations is measured how often an individual participates in community association, work-related/trade union, and Jirga's meetings.

ii. **Participation in Political Activities**

Participation in political activities is measured how often an individual involves in political discussion, takes part in political meetings and demonstrations, listens to political debates, works voluntarily and provides financial support to political party, and casts vote in election.

iii. **Participation in Government Organizations**

Participation in government organizations is measured how often an individual participates in meetings of local government/local civil administrations, and law enforcement agencies.

iv. **Participation in Non-Government Organizations**

Participation in NGOs is measured how often an individual participates in meetings of NGOs that work for the social betterment.

1.4.2.1.3. Cooperation

Like the earlier two informal institutions, we also take different forms of cooperation. These include within-group cooperation, collective problems solution, cooperation with the government organizations, and cooperation with non-government organizations. Since, each category of cooperation has different sub-components, we quantify the sub-components of each cooperation category by a likert scale of 1 to 4. The value 1 implies no cooperation from the individuals and 4 predicts their highest level of cooperation. Additionally, we construct each dimension of cooperation as a mean value of its sub-components.

i. **Within-Group Cooperation**

Within-group cooperation is measured how often an individual receives economic and social support from family, relatives, neighbors, known people, and local community leaders.

ii. **Collective Problem Solution**

Collective problem solution is measured how often an individual follows the guidelines of community associations, work-related/trade union, and Jirga to solve the common problems of the society.

iii. **Cooperation with Government Organizations**

Cooperation with government organizations is measured how often an individual provides logistic support and moral support to government

organizations. Besides, how often such organizations face pressure in the localities in the implementation of any social program.

iv. Cooperation with Non-Government Organizations

Cooperation with non-government organizations is measured how often an individual provides logistic support and moral support to non-government organizations. Besides, how often such organizations face pressure in the localities in the implementation of any social program.

1.4.2.2. Control Variables

i. **Economic Variables**

We consider two variables for economic control, (a) income, and (b) employment status of the head of a household. Income is measured as the total monthly earnings of households. While, the employment status is assessed by a dummy variable, which takes 1 for employed household head and 0 otherwise.

ii. Demographic Variables

The demographic controls include, (a) age (in years), (b) education (in years), (c) marital status (the dummy variable, equal 1 for married individuals and 0 otherwise), and the (d) total household size.

iii. Other Variables

The other covariates include (a) location of residence, which is a dummy variable and takes the values of 1 for households in urban zone and zero otherwise, and (b) the religiosity level of the respondents, which is an index of number of prayers one offer (1 to 5 times), and recitation of holy Quran and obeying hadiths (both the variables measured on likert scale of 1 to 4).

1.4.3. Sampling Technique

As we collect primary data in District Swat and Buner (Buner is kept as a reference category). Administratively, each district is divided into a number of Tehsils, which is

further divided into Village Councils and Neighborhood Councils.[22] This division provides us a favorable setting to use Cluster Sampling approach. The cluster sampling technique is valid because the households within each village and neighborhood councils might be heterogeneous in terms of different characteristics, however, they might be homogenous across the tehsils and councils. Organizationally, district Swat is divided into 7 tehsils (Babozai, Bahrain, Barikot, Charbagh, Khwazakhela, Kabal, Matta), whereas, the district Buner into 4 tehsils (Khudukhail, Mandnr, Gagra, Daggar). Additionally, the 7 tehsils of district Swat and the 4 tehsils of Buner are divided into 165 and 105 village councils and neighborhood councils, respectively. We treat each of the tehsils as a separate cluster and the village councils and neighborhood councils as a sub-cluster. Since, each of the clusters comprised a number of sub-clusters, thus within each cluster, we perform a random selection among the sub-clusters. We randomly take 100 and 70 villages and neighborhood councils from district Swat and Buner, respectively. These randomly picked sub-clusters are the primary sampling units (PSU), which outline the sampling frame of the study. Additionally, each PSU has a bunch of households; we retrieve the identity list of the secondary sampling unit (SSU) (household) of selected sub-clusters from the local administration of each district and randomly pick the desired sample of households from each tehsil on the basis of households' share. Additionally, when we face the issue in the identity list, i.e. when the identity information does not match the given PSU, we take the first household in a PSU and then subsequent every 10^{th} household.

1.4.4. Descriptive Statistics

After conducting the above process, we in the following tables 1.1 and 1.2, present the

[22] Village Council is rural places, while Neighborhood Councils are urban and they are near to main city or have characteristics of city.

Table 1.1: Descriptive Statistics (2010)

	Swat				Buner			
Variables	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Within-Group Trust	2.964	0.442	1.8	4	2.396	0.356	1.4	3.6
Out-Group Trust	2.182	0.508	1	3.5	2.938	0.570	1.5	4
Trust on Government Organizations	2.435	0.674	1	4	3.304	0.543	1.333	4
Trust on Non-Government Organizations	2.927	0.573	1	4	2.49	0.535	1	4
Participation in Social Organizations	2.905	0.491	1.333	4	2.405	0.390	1.333	4
Participation in Political Activities	2.645	0.361	1.714	3.571	2.233	0.316	1.285	3.142
Participation in Government Organizations	2.29	0.527	1	3.5	3.097	0.647	1	4
Participation in Non-Government Organizations	3.018	0.545	1	4	2.383	0.416	1	3.5
Within-Group Cooperation	3.049	0.422	1.8	4	2.458	0.346	1.6	3.8
Collective Problems Solution	2.775	0.519	1.25	4	2.291	0.465	1	3.75
Cooperation With Government Organizations	2.47	0.585	1	4	3.177	0.526	1.666	4
Cooperation With Non-Government Organizations	3.079	0.450	2	4	2.67	0.440	1.333	4
Income of Household	30242.5	13592.62	10000	47000	29687.5	13051.42	5000	51000
Employment	0.54	0.499	0	1	0.565	0.496	0	1
Education	13.765	2.996	0	18	13.4225	2.991	0	18
Respondents Age	36.255	6.815	26	56	35.4525	7.539	25	50
Marital Status	0.55	0.498	0	1	0.5875	0.492	0	1
Household Size	8.5	2.210	3	11	8.29	2.596	2	14
Residence Location	0.4575	0.498	0	1	0.4025	0.491	0	1
Religiosity	2.986	0.522	1.666	4.333	2.9425	0.532	1.666	4.333

Note: Author Own Calculations. The Total Number of Observation are 400 for each District.

descriptive statistics of institutional and control variables of the two districts for the years 2010 and 2018, respectively. The descriptive statistics of institutional variables for the year 2010 suggest that immediately after the termination of conflict, the average within-group trust and trust on non-government organizations remained high among the conflict affected individuals (2.964, 2.927) as compared to non-affected individuals (2.396, 2.49), respectively. Nevertheless, conflict affected individuals exhibited lower average out-group trust and trust on government organizations (2.182, 2.435) as compared to non-exposed individuals (2.938, 3.304), respectively. Similarly, the conflict affected individuals revealed higher average participation in social organizations, political activities, and non-government organizations (2.905, 2.645, and 3.018) as compared to non-affected individuals (2.405, 2.233, and 2.383). However, the affected individuals showed lower average participation (2.29) in government organizations as compared to the individuals (3.097) in the district Buner. Furthermore, the conflict affected individuals revealed higher average within-group cooperation, efforts for collective problems solution, and cooperation with the non-government organizations (3.049, 2.775, and 3.079) as compared to non-affected individuals (2.458, 2.291, and 2.67), respectively. However, the affected individuals extended lower average cooperation with the government organizations (2.47) than the non-affected individuals (3.177).

The descriptive statistics of the set of control variables suggest that although, there prevailed variation in the control characteristics of two districts, however, they remained closer in terms of magnitude. For instance, the average household's income and number of employed people in Swat were 30242.5 and 0.54, while in Buner the average household's income and number of employed people were 29687.5 and 0.565, respectively. Similarly, the average magnitude of age, education, and marital status of

Table 1.2: Descriptive Statistics (2018)

	Swat				Buner			
Variables	**Mean**	**Std. Dev.**	**Min**	**Max**	**Mean**	**Std. Dev.**	**Min**	**Max**
Within-Group Trust	2.782	0.422	1.6	4	2.312	0.342	1.2	3.6
Out-Group Trust	2.47	0.540	1	4	3.06	0.583	1.5	4
Trust on Government Organizations	2.704	0.593	1	4	3.420	0.493	1.3333	4
Trust on Non-Government Organizations	2.651	0.564	1	4	2.342	0.531	1	4
Participation in Social Organizations	2.588	0.501	1.333	4	2.238	0.409	1	4
Participation in Political Activities	2.422	0.458	0.857	7.5714	2.093	0.356	.85714	3.142
Participation in Government Organizations	2.575	0.538	1.5	4	3.17	0.608	2	4
Participation in Non-Government Organizations	2.541	0.5742	1	4	2.035	0.450	1	3.5
Within-Group Cooperation	2.715	0.400	1.6	3.8	2.292	0.307	1.4	3.4
Collective Problems Solution	2.352	0.452	1.25	3.75	2.010	0.359	1	3
Cooperation With Government Organizations	2.814	0.490	1.333	4	3.37	0.464	1.666	4
Cooperation With Non-Government Organizations	2.81	0.487	1.333	4	2.505	0.418	1.333	4
Income of Household	41352.5	13561.64	17000	62000	40245	13923.89	13000	64000
Employment	0.585	0.493	0	1	0.627	0.484	0	1
Education	13.922	3.450	0	19	13.735	3.093	1	19
Respondents Age	46.112	6.815	36	66	45.362	7.519	35	60
Marital Status	0.752	0.432	0	1	0.762	0.426	0	1
Household Size	12.5	2.210	7	15	12.297	2.600	6	18
Residence Location	0.457	0.498	0	1	0.402	0.491	0	1
Religiosity	2.677	0.528	1.666	4.333	2.66	0.531	1.666	4.333

Note: Author Own Calculations. The Total Number of Observation are 400 for each District.

individuals in Swat were 36.255, 13.765, and 0.55. Whereas, in Buner the average magnitudes of same variables were 35.4525, 13.4225, and 0.5875, respectively. Additionally, in district Swat, the average household size, urban residence, and level of religiosity were 8.5, 0.4575, and 2.986, where the magnitude of these variables in district Buner were 8.29, 0.4025, and 2.9425, respectively.

The above discussion suggests that soon after the termination of conflict, i.e. in 2010 there existed a clear difference in the magnitude of the institutional variables of the two districts. However, the magnitudes of their control characteristics appeared no very different in magnitude.

Furthermore, the descriptive statistics of institutional and control characteristics of the two districts in the table 1.2 depicts the same trend, which we observed in the table 1.1. The descriptive statistics of institutional variables for the year 2018 suggest that almost nine years later of conflict, the average within-group trust and trust on non-government organizations still remain high among the victims' individuals (2.7825, 2.651) as compared to non-victim individuals (2.312, 2.342), respectively. Nevertheless, conflict affected individuals exhibit lower average out-group trust and trust on government organizations (2.47, 2.704) as compared to non-exposed individuals (3.06, 3.420), respectively. Similarly, the conflict affected individuals also show higher average participation in social organizations, political activities, and non-government organizations (2.588, 2.422, and 2.541) as compared to non-affected individuals (2.238, 2.093, and 2.035). However, the affected individuals show lower average participation in government organizations (2.575) relative to individuals (3.17) in the district Buner. Finally, the conflict affected individuals show higher average within-group cooperation, efforts for collective problems solution, and cooperation with the non-government organizations (2.715, 2.352, and 2.81) as compared to non-

affected (2.292, 2.010, and 2.505), respectively. However, the affected extend lower average cooperation to government organizations (2.814) than the non-affected individuals (3.37).

Like the earlier trend in control characteristics of the two districts, the descriptive statistics of covariates still depicts similar trend, i.e. there exist dissimilarity in the control characteristics of two districts, and however, their magnitudes seem closer. For instance, the average household's income and number of employed people in Swat are 41352.5 and 0.585, while in Buner the average household's income and number of employed people are 40245 and 0.627, respectively. Similarly, the average magnitude of age, education, and marital status of individuals in Swat are 46.255, 13.922, and 0.752, whereas, in Buner the average magnitude of same variables are 45.362, 13.735, and 0.762, respectively. Additionally, in district Swat, the average household size, urban residence, and level of religiosity are 12.5, 0.457, and 2.655, where the magnitude of these variables in district Buner are 12.297, 0.402, and 2.66, respectively.

1.4.5. Identification Strategy

In order to trace the impact of conflict on informal institutions, we form the treated and control groups. We consider district Swat as a treated entity, where the non-state actors challenged the state's writ and forcefully imposed own designed Islamic rules on the inhabitants. In return, the government conducted a heavy military operation – the operation Rah-e-Rast, to eradicate the militancy and establish state writ. Additionally, we consider district Buner as a control group. The selection of Buner district as a control group make sense. The district Swat and Buner have protracted history and share various common characteristics. Firstly, the population of both the districts are dominated by the Yousafzai tribe. Secondly, both the districts remained the part of

Yousafzai State of Swat from 1915-1969, where they were ruled by a Monarch family and their social, political, and economic lives were significantly shaped by the state formal institutions.[23] Third, when in 1969, the ruler of Swat State decided to merge into the Pakistan state, even then the Buner region remained the part of district Swat until 1991. Besides, prolong historical experiences, the district Buner remained largely unaffected in conflict. However, it is important to mention that some areas of Buner partially affected during the conflict. In fact, when peace agreement signed between the state and militants to restore the peace in Swat, the militants violated the agreement, escalated violent activities and challenged the state writ in the neighboring districts, like Shangla, Dir, and Buner (Avis, 2016). The militants initially entered into the Daggar Tehsil of Buner, and attempted to suppress the state power and indigenous people. According to the information obtained from local administration, they targeted different areas in Daggar Tehsil; namely Ghazikhanai, Sultanwas, Gookand, and Shalbandai. Nevertheless, when militants attempted to start their violent struggle in Buner, unlike Swat, they faced stiff armed resistance from the local population. The inhabitants of Buner formed various strategies to stop the entry of militants into the district. Firstly, they established peace Lashkar (Citizens Militia) in the leadership of local political leader Fateh Khan, which with his companions resisted many attacks and killed several militants' fighters.[24] Secondly, the people of Buner started search operation in the hilly areas of border to wipe out the hideout of militants. Thirdly, they dug the roads and blocked the intrusion of militants. Additionally, state armed forces conducted operation in the selected areas of Buner and established check post on borderline, which not only pushed back militants to Swat, but also stopped their further

[23] For detail discussion, see also Rome (2008).

[24] See also https://nation.com.pk/04-Nov-2012/anti-taliban-leader-killed-in-buner-suicide-hit.

entry to Buner. This conflicting situation in Buner resulted into a partial migration from the areas (mentioned above) where the conflict occurred. However, the duration and intensity of conflict which occurred in Buner remained reasonably lower than district Swat. For instance, the operation led by the paramilitary Frontier Corps (FC) took only 2 weeks to clear Buner from all terrorist. Besides, the government instructed the migrated people of Buner to go back to their homes.[25] This quick return to Buner indicated government hopes for a similarly swift return of the civilian to Swat. As mentioned earlier, Buner largely remained unaffected in the conflict. The local administration's report suggests that only 5% area of Buner affected during the battel (GOP, 2018). Hence, besides prolong historical ties on both sides of the border, the spillover effects of conflict to Buner might be a threat to our identification strategy. To solve this issue, we specify the village and neighborhood councils in Buner where the conflict occurred and avoid them from our sample. This strategy helps us to create a more realistic counterfactual. To further support our claim that Buner might be a potential counterfactual, we rely on paired sample t-test.

1.4.5.1. Paired Sample t-test

The paired sample t-test, which is also referred to as dependent sample t-test, is a statistical technique used to check whether the mean difference between the two sets of observations is statistically significant or not. More precisely, the paired t-test is applied to determine whether the mean difference between two sets of observations is same in two related groups, measured at two different points of time or undergo a different circumstance.

We apply the paired sample t-test to check whether households' covariates across the two districts are similar or not. However, it is important to mention that our

[25] For detail, see also https://www.mcclatchydc.com/news/nation-world/world/article24538744.html.

study mainly focus the post-conflict characteristics of households. Yet, it is generally perceived that comparing the trends of covariates of control and treated groups in post-conflict setting might be difficult. Thus, to verify that households remained similar in terms of covariates across Swat and Buner before conflict, we rely on Pakistan Social and Living Standards Measurement Survey (PSLM) data for the year 2007-08. The PSLM data is collected by Pakistan Bureau of Statistics (PBS) at district and provincial level. The PSLM data set is designed to provide social and economic information to assist the government in designing various development plans. However, it is important to note that we cannot compare it to our data set because of different sample size and nature of households in the two survey. Additionally, we also compare the covariates of the households in two districts in the post-conflict life. First, we compare their covariates in 2010, which is immediate post-conflict period, and later, compare their covariates in 2018, which is almost nine years later period of conflict. In the following table 1.3, the findings of the paired t-test are given, which are based on the PSLM data.

Table 1.3: Paired Sample t-test (Based on PSLM Data 2007-08)

Variables	Swat Mean	Buner Mean	Difference in Means	Combined Mean	t	Pr (|T| > |t|)
Income of Household	20808	18642	-2166	19725	-1.617	0.106
Employment	0.723	0.788	0.064	0.755	1.388	0.165
Education	10.047	9.547	-0.5	9.797	-1.203	0.229
Respondents Age	45.1	47.094	1.994	46.097	1.237	0.216
Marital Status	0.8	0.829	0.029	0.814	0.696	0.486
Household Size	8.135	7.517	-0.617	7.826	-1.545	0.123
Residence Location	0.617	0.558	-0.058	0.588	-1.100	0.271

Note: Author Own Calculations Based on the PSLM data 2007-08.

It is interesting to note that probability values (Pr (|T| > |t|) associated to each variable are greater than the 0.1, which suggest that suggests that the covariates of the two

districts are balanced before the conflict occurred. In other words, the households in the two districts are similar.[26]

Similarly, the following tables 1.4 and 1.5 depict the paired t-test findings of the 2010 and 2018, respectively.

Table 1.4: Paired Sample t-test (Based on 2010 Data)

Variables	Swat Mean	Buner Mean	Difference in Means	Combined Mean	t	Pr (|T| > |t|)
Income of Household	30242	29687	-555	29965	-0.589	0.556
Employment	0.54	0.565	0.025	0.552	0.710	0.477
Education	13.765	13.422	-0.342	13.593	-1.618	0.106
Respondents Age	36.255	35.452	-0.802	35.853	-1.579	0.114
Marital Status	0.55	0.587	0.037	0.568	1.070	0.284
Household Size	8.5	8.29	-0.21	8.395	-1.231	0.218
Residence Location	0.457	0.402	-0.055	0.43	-1.571	0.116
Religiosity	2.986	2.942	-0.0441	2.964	-1.183	0.237

Note: Author Own Calculations Based on 2018 data.

Table 1.5: Paired Sample t-test (Based on 2018 Data)

Variables	Swat Mean	Buner Mean	Difference in Means	Combined Mean	t	Pr (|T| > |t|)
Income of Household	40245	41352	-1107	40798	-1.139	0.254
Employment	0.585	0.627	0.042	0.606	1.229	0.219
Education	13.922	13.737	-0.185	13.83	-0.798	0.424
Respondents Age	46.112	45.362	-0.75	45.737	-1.478	0.139
Marital Status	0.752	0.762	0.01	0.757	0.329	0.741
Household Size	12.5	12.297	-0.202	12.398	-1.186	0.235
Residence Location	0.457	0.402	-0.055	0.43	-1.571	0.116
Religiosity	2.677	2.66	-0.017	2.668	-0.468	0.639

Note: Author Own Calculations Based on 2010 data.

It is important to note that in both the tables the probability values (Pr (|T| > |t|) associated with each variable are greater than the 0.1, which confirm that even after the conflict, the covariates of the households in two districts remain similar. To sum, the discussion suggests that households in the two districts exhibit a similar trend over time. Since, the households across the border are homogenous; we can reliably interpret the causal impact of conflict on informal institutions.

[26] The PSLM does not collect information on religious preferences of individuals; therefore, we compare all other covariates except the religiosity level of the individuals.

1.4.6. Methodology

After specifying the treated and control groups and matching their covariates, we now discuss the econometric techniques, which fit to our data nature. Since, our data is cross sectional in nature and the outcome variables are continuous; the Ordinary Least Square (OLS) technique appears to be more appropriate in our case. This technique is also applied by different earlier studies that examined various socio-economic effects of violent conflicts (Werner, 2016; De Juan and Pierskalla, 2016; Grosjean, 2014; Sacks and Larizza, 2012; Hutchison and Johnson, 2011; Collier, 1999; Angrist and Krueger, 1994). The OLS technique is flexible enough to capture treatment effect of any intervention. However, OLS might leads us to biased estimates if we ignore any potential selection into violence other than control characteristics. For instance, the survivor bias and displacement (internal migration) might influence OLS estimates. However, our data and analysis nature allow us to solve these problems. Since, our data include a variety of households from different parts of the conflict zone (highly, moderately, and least affected), therefore, include the households' information on informal institutions that experienced lives loss in the conflict. Additionally, though the massive displacement occurred from the district Swat, however, such migration was for a shorter period. Also, majority of displaced people took asylum in the camps, while the other housed in the same KP province. Therefore, the individuals remained together during the displaced period and largely unexposed to outward environment. Similarly, the local administration reports suggest that almost all the people have returned home after the migration. Additionally, we consider transformation of informal institutional, which are path dependent and required a persistent shock to be changed. Hence, there could not be any other selection into violence that influence OLS estimates in our case. We estimate the following regression line through the OLS.

$$Y_i = \beta_o + \beta_1 D_i + \theta^\tau \sum Z_i + U_i \qquad (1)$$

In model 1, Y is a vector of informal institutions, which includes different forms of trust, participation, and cooperation. In the above regression, D_i is the dummy variable, which takes the value of 1 for the households which lie in the treated zone, i.e. in conflict zone, and 0 otherwise. The coefficient associated to D_i, β_1 captures the intensity of change in institutional structure as a results of conflict shock. Z_i is a vector of control variables, which includes economic controls, demographic controls, locations of households, and the level of religiosity. Whereas, U_i is the error term. We estimate model 1 for each of the underlined objectives for the year 2010 (the period right after conflict), and 2018 (the period almost 9 years later of conflict). The basic idea behind the two period analysis is to assess the institutional persistency, when the informal structure exposes to a conflict shock.[27] However, there always exists threat to the existing causal relationship due to the problem of endogeneity. The problem of endogeneity might happens because of omitted variable bias, measurement error, and reverse causality. We control omitted variable bias by including all potential controls in the model. Similarly, to eliminate or minimize the measurement error, we ensure randomization in data. As, in post-conflict life, it is quite possible that certain individuals might not reveal their true preferences. Thus, randomization helps to avoid a specific class of individuals and obtain a more accurate information. Additionally, to overcome the problem of reverse causality, we proceed to Regression Discontinuity Design (RDD). The problem of reverse causality happens when underlined institutional structure in an area affect the level of violence. For instance, weak institutions might promote the conflict, while the strong might reduce the likelihood of conflict. The RDD

[27] The institutional data of the 2010 is collected through recalling the period of 2010. Various surveys follow the same approach, for instance Life in Transition Survey (LITS) adopt the recalling approach for collecting various form of data in post war life.

in our case takes into account the spatial characteristics of the region and use border to conflict zone distance as an instrument to solve the problem of endogeneity.

RDD is a quasi-experimental strategy that captures the causal effects of any intervention by determining a cutoff below or above which an intervention is assigned. Different studies used the said methodology for examining various policies and intervention impact (Van der Klaauw, 2002; Angrist and Lavy, 1999; Thistlethwaite and Campbell, 1960). Another form of RDD is Geographical or Spatial Regression Discontinuity Design (SRDD). The SRDD considers the location of the regions, where the threshold is the boundary that demarcates two regions. In this study, we use the SRDD. The SRDD considers the location of the regions, where the threshold is the boundary that demarcates two regions. A number of studies used SRDD to assess various issues, for instance, quality compensation for teachers on students' performance in various US' districts (Moore, 2015), labor market dynamics of the wage differential in different zones of Italy (de Blasio and Poy, 2014), and housing prices and school attendance across the boundaries of US districts (Bayer *et al.* 2007; Black, 1999).

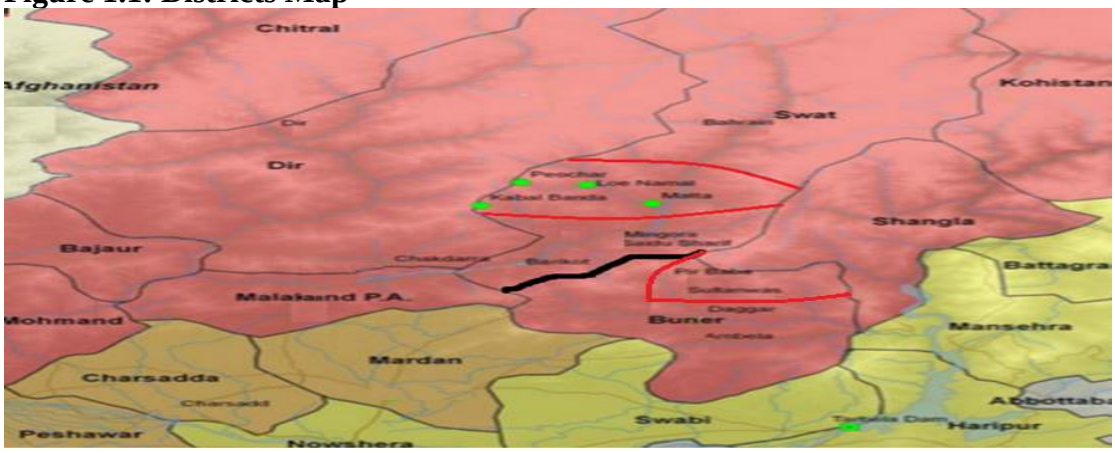
Deriving idea from the above literature, we employ the SRDD to capture the spatial effect of conflict on the informal institutions. However, the SRDD technique is based on certain assumptions that must be met before we apply it. Firstly, the treated and control group must be similar in terms of socioeconomic characteristics. Secondly, the boundary line that demarcates the two regions must be exogenous or purely random in nature, i.e. it should not be defined by the conflict and established before the outset of conflict. Third, the treatment should be exogenous in nature, i.e. it should not be driven by the preferences of the general individuals in the society. In our case, all these three assumptions of SRDD are fulfilled. For instance: (a) the inhabitants in Swat and Buner are identical, i.e. share common socioeconomic characteristics as shown by

historical evidences and paired sample t-test, (b) the boundary line that separate two districts is purely exogenous, i.e. it was established in 1991, long before the conflict, and (c) conflict was not happened due to common masses actions, rather it was promoted by an organized militants group under the leadership of Maulana Fazalullah. Hence, the occurrence of conflict was purely exogenous.

In the following figure 1.1, the bold black line depicts the boundary line that divides the two districts. After conflict, the local administration divided the district Swat into three parts, i.e. the (a) Moderately affected, (b) Highly affected, and (c) Least affected. They have made this classification on the basis of intensity of violence in the areas. For instance, the local administration declared from border to 44Km area of Swat as moderately affected. By moderately affected area, they mean that in such part of the district though the militants attempted violent activities, however, never succeeded to establish their writ. Their failure in this very part was mainly attributed to the presence of military base, security check posts, and formation of effective security strategies that blocked the entry of militants. Consequently, inhabitants in such region exposed to a modest level of violence. Similarly, the local administration declared the next part of district, i.e. from 45 to 60Km as highly effected area. This is the middle part of the district Swat. They declare it highly affected area because unlike the first part of the district, this part was totally controlled by the militants. In this part, the militants established headquarter, operated illegal FM radio, executed opponents and government personnel, and setup militants training camps and Sharia Courts as primary and parallel judicial system. Alternatively, from this middle part of the district, they arranged and controlled all their violent activities in district Swat and other neighboring districts. Nevertheless, when the military started operation Rah-e-Rast, it was the most challenging part of the district to take it back from the militants, because they captured

all the strategically important mountains like Ghat Pewchar and Najia Top. However, to clear the area from the militants, the military called the Special Service Group (SSG) of army. The SSG with the support of Air force cleared the areas with heavy military cost. The military destroyed the camps and headquarter of the militants and established a full writ of the state. Additionally, to ensure peace in the area, the military established check post and conducted a regular search operation. Likewise, the local administration declared, the rightest part of the district, which cover the area from 61 to 93Km as least affected area of district Swat. They declared it least affected because in this part of the district a minimum violence occurred. It was because of the negotiating power of the inhabitants with state actors and militants. Initially, when the militants entered in such region; the already informed Jirga (Counsel of Leaders) in area started negotiations with them and stopped them from destroying public buildings like schools, police stations, and hospitals. The counsel ensured that they will not allow any group to conduct violent activities in their area, however, promised the commanders of militants that they will follow the Sharia rules for which they (the militants) struggled. Fortunately, with the least presence of militants in area, the military did not use coercion. Consequently, the people in this area least affected due to violence. The division of the district Swat is also clear from the following figure 1.1.

Figure 1.1: Districts Map



Source: Refugee Review Tribunal (2009)

The area from borderline to the first red line is the moderately affected, the area within the red line is the highly affected areas, and the area to the right of second red line is least affected area. This official division of the conflict zone provide us a very interesting setting to capture the heterogeneous impact of conflict shock. In order to do so, we estimate the following models for the treated and control groups, respectively.

$$Y_t = \alpha_t + \beta_t (X - b) + \varepsilon_t \qquad (2)$$

$$Y_c = \alpha_c + \beta_c (X - b) + \varepsilon_c \qquad (3)$$

In the above models, Y is the set of informal institutions in the two districts. Where, α_t and α_c are the intercepts of the models in the treated and control districts, respectively. b is the border line, while $(X - b)$ is the distance from the border line to districts. By estimating the above models, the impact of conflict on informal structure can be computed through the difference between the intercepts α_t and α_c of the two models. However, to avoid the complications, the present study uses the pooled version of the equation (1) and (2), presented by Lee and Lemieux (2010). Let $\tau = \alpha_t - \alpha_c$ and the dummy variable D, which equal 1 for the treated district and 0 for control district. The pooled model is of the following form.

$$Y = \alpha_0 + \tau D + (\beta_t - \beta_c)(X - b) + (\beta_t - \beta_c) D (X - b) + \theta^{\tau} \sum Z_i + \varepsilon \qquad (4)$$

Our parameter of interest is τ, which shows the average treatment effect on the treated district, and can be interpreted as the jump between the two regression lines on the border. Y is the set of informal institutions, and Z_i is the set of control variables in our regression as discussed earlier.

1.5. Results and Discussion

This section provides the empirical findings of the study. The section 5.1 discusses the impact of conflict on various form of trust in the society. The section 5.2 describes the impact of conflict on different dimensions of participatory behavior of the inhabitants.

Finally, the section 5.3 unveils the impact of conflict on various form of cooperation in the society.

1.5.1. Trust

1.5.1.1. Within-Group Trust

The following tables, 1.6 and 1.7 report the OLS and SRDD estimates of conflict shock on within-group trust, respectively. While the panel A and panel B in the tables exhibit within-group trust in 2010 and 2018, respectively. The coefficients associated to conflict in all the specifications of the tables suggest that exposure to conflict promotes within-group trust in the society. For instance, in panel A, the OLS estimate suggest that immediately after conflict, within-group trust among the conflict affected individuals increased on average by 0.568 percent points as compared to non-affected individuals. Additionally, the region dummy appears insignificant, which suggests that there happened no significant difference in the level of within-group trust among the urban and rural individuals. Alternatively, the effect of conflict equally prevailed across the urban and rural regions. Interestingly, this rise in within-group trust prevailed over time. As, the estimate in panel B suggests that even after nine years of conflict, the within-group trust of the conflict affected individuals remained high on average by 0.471 percent points as compared to individuals in the control district. Additionally, the region dummy suggests that there been no difference in within-group trust among the urban and rural regions' individuals over the time. This suggests that conflict such strongly penetrates in social structure that its effects prevails over time.

The above findings are supported by the earlier empirical studies such as Gilligan *et al.* (2014), Voors *et al.* (2012), Bellows and Miguel (2009), and Blattman (2009). Additionally, our claim is also in accordance with evolutionary theories, which consider conflict events as primary source of within-group bonding (Choi and Bowles, 2007; Bowles, 2008). The within-group trust among directly exposed inhabitants

Table 1.6: Within-Group Trust (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.568***	0.567***	0.568***	0.568***	0.469***	0.471***	0.471***	0.471***
	(0.028)	(0.028)	(0.029)	(0.029)	(0.027)	(0.027)	(0.028)	(0.028)
Region Dummy	-0.000	-0.002	-0.005	-0.005	0.023	0.023	0.020	0.020
	(0.029)	(0.029)	(0.029)	(0.029)	(0.028)	(0.027)	(0.028)	(0.028)
Constant	2.397***	2.448***	2.392***	2.392***	2.303***	3.245***	3.187***	3.187***
	(0.021)	(0.264)	(0.289)	(0.289)	(0.021)	(0.376)	(0.400)	(0.400)
Observations	800	800	800	800	800	800	800	800
R-squared	0.334	0.335	0.339	0.339	0.273	0.279	0.281	0.281
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.7: Within-Group Trust (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.148***	0.224***	0.125***	0.128***	0.190***	0.108***
	(0.012)	(0.019)	(0.009)	(0.011)	(0.018)	(0.009)
Border Distance	0.007***	0.038***	-0.002	0.013***	0.033***	0.000
	(0.002)	(0.006)	(0.002)	(0.002)	(0.007)	(0.002)
Constant	2.775***	-0.635	2.155***	3.226***	-0.189	4.754***
	(0.426)	(0.714)	(0.439)	(1.001)	(1.971)	(0.901)
Observations	348	165	287	348	165	287
R-squared	0.360	0.620	0.424	0.352	0.530	0.382
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

increases because of two reasons. Firstly, they need to develop a strong bond with other in-group members to secure physically each other against external shocks. Secondly, they tie in a bond in order to gain psychologically support to minimize the post-traumatic stress disorder (PTSD), which is necessary for a normal life.

The OLS technique provides a combine treatment effect and ignores the heterogeneous impacts of conflict. To examine the heterogeneous impact of conflict, we rely on SRDD estimates. As evident from panel A, the highly exposed region's individuals exhibited comparatively high average within-group trust (0.224) as compared to moderately (0.148), and least affected (0.125) areas' individuals. Similarly, even after nine years later of conflict, the same trend prevailed. The panel B estimates suggest that highly exposed individuals depicted higher average within-group trust (0.190) than moderately (0.128), and least affected (0.108) individuals in the regions. This implies that in conflict studies not only the combine effect matter, but also the spatial effect, which provides a more precise information of social impact of conflict.

The above findings in terms of magnitudes and direction appear reasonable as for the social structure of the inhabitants of district Swat is concerned. The social life of these inhabitants are dominated by Pakhtunwali code of conduct, which guides them to behave more pro-socially towards in-group individuals in the times of misfortunes. The conflict shock, which these people faced for years, affected their social system. Hence, the optimal solution to mitigate the shock and ensure future security, the inhabitants developed a strong bond in terms of higher within-group trust. Additionally, the non-linear effects of conflict also seem promising. The individuals that lived in intense part of the conflict zone preferred higher within-group trust followed by moderately, and the least affected regions' individuals to remain safe. Alternatively, the

spatial findings imply that highly affected individuals remained more cautious about their present and future security relative to the moderately and least conflict affected individuals. Hence, the highly affected regions' individuals exhibited higher within-group trust than other regions' individuals.

1.5.1.2. Out-Group Trust

The following tables, 1.8 and 1.9 depict the OLS and SRDD estimates of conflict on out-group trust, respectively. Unlike within-group trust, exposure to conflict impaired out-group trust. The OLS estimate suggests that immediately after conflci, the out-group trust among the conflict-affected individuals decreased on average by 0.761 percent points as compared to the individuals in the control district. Similarly, the region dummy appears insignificant, which suggests that there remained no difference in the level of out-group trust among the urban and rural individuals. Additionally, the same trend prevailed over time. For instance, the estimate in panel B suggests that after nine years later of conflict, the out-group trust of the conflict affected individuals remained lower on average by 0.589 percent points as compared to control inhabitants. Again the region dummy appears insignificant, which suggests that even over time there prevailed no significant difference in the behavior of the urban and rural regions' individuals regarding out-group trust.

The above findings are support by the earlier studies such as Mironova and Witt (2018) and Çelebi *et al.* (2014). The reduction in out-group trust occurs because when inhabitants in conflict zone frequently experience destruction and violence, they lose their social networks and feel a reduced sense of protection. This situation in turns promote general feelings of resentment and distrust toward everyone, particularly, about out-group members (Werner, 2016).

Table 1.8: Out-Group Trust (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	-0.759***	-0.761***	-0.762***	-0.761***	-0.592***	-0.592***	-0.590***	-0.589***
	(0.038)	(0.038)	(0.038)	(0.039)	(0.040)	(0.040)	(0.040)	(0.040)
Region Dummy	0.054	0.052	0.057	0.056	0.035	0.033	0.038	0.038
	(0.039)	(0.039)	(0.039)	(0.039)	(0.040)	(0.040)	(0.040)	(0.040)
Constant	2.917***	2.390***	2.289***	2.327***	3.046***	2.631***	2.723***	2.812***
	(0.032)	(0.355)	(0.372)	(0.383)	(0.034)	(0.570)	(0.607)	(0.606)
Observations	800	800	800	800	800	800	800	800
R-squared	0.331	0.334	0.340	0.340	0.217	0.218	0.223	0.225
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.9: Out-Group Trust (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.198***	-0.253***	-0.156***	-0.153***	-0.198***	-0.119***
	(0.017)	(0.021)	(0.013)	(0.018)	(0.022)	(0.013)
Border Distance	-0.008**	-0.035***	0.003	-0.016***	-0.030***	0.002
	(0.004)	(0.008)	(0.002)	(0.003)	(0.008)	(0.002)
Constant	3.107***	4.203***	2.134***	3.470***	5.582***	2.742***
	(0.558)	(0.978)	(0.616)	(0.907)	(1.299)	(0.936)
Observations	348	165	287	348	165	287
R-squared	0.325	0.558	0.350	0.239	0.435	0.232
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Unlike the OLS, the SRDD estimates confirm the nonlinear impact of conflict. The estimates in panel A suggest that immediately after the conflict, the individuals in highly exposed area exhibited lower average out-group trust (-0.253) than moderately (-0.198) and least affected (-0.156) regions' individuals. It is obvious to note that same trend prevailed even after nine years later of conflict. The panel B estimate suggest that individuals in highly exposed region exhibited comparatively lower average out-group trust (-0.198), than individuals in moderately (-0.153) and least affected (-0.119) parts of the districts.

The above findings are relevant and explain the rational behavior of the inhabitants in post-conflict life in the district Swat. The higher negative trust on out-group members exists because of the perception that though violent struggle in the district started by some indigenous Islamist activists, however, it was controlled and intensified by unknown actors, i.e. the militants from the other parts of the country. Therefore, the inhabitants' preferred not to trust the out-group members in order to avoid the cost associated with interacting them. Additionally, the inhabitants in highly exposed region exhibited lower trust on out-group members as compared to moderately and least affected areas. This spatial effect exists because they (highly affected) witnessed a more distrust and violent behavior of the unknown individuals in the district during conflict. Thus, conflict has significantly changed the preferences of the inhabitants regarding the out-group members in the district.

1.5.1.3. Trust on Government Organizations

The following tables 1.10 and 1.11 report OLS and SRDD estimates of conflict on trust on government organizations, respectively. Like out-group trust, trust on government organizations decreased in post-conflict life. The OLS estimate in panel A suggests that immediately after conflict, the trust of conflict-affected individuals on government

Table 1.10: Trust on Government Organizations (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	-0.867***	-0.869***	-0.862***	-0.859***	-0.718***	-0.718***	-0.717***	-0.716***
	(0.043)	(0.043)	(0.044)	(0.044)	(0.039)	(0.039)	(0.039)	(0.039)
Region Dummy	-0.029	-0.029	-0.033	-0.034	0.021	0.020	0.024	0.025
	(0.044)	(0.043)	(0.044)	(0.044)	(0.039)	(0.039)	(0.039)	(0.039)
Constant	3.316***	1.608***	1.644***	1.831***	3.412***	2.679***	2.905***	2.992***
	(0.032)	(0.407)	(0.444)	(0.460)	(0.030)	(0.554)	(0.585)	(0.590)
Observations	800	800	800	800	800	800	800	800
R-squared	0.335	0.351	0.354	0.356	0.302	0.304	0.311	0.314
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.11: Trust on Government Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			**Bandwidth**		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.237***	-0.299***	-0.176***	-0.207***	-0.248***	-0.150***
	(0.020)	(0.023)	(0.013)	(0.018)	(0.019)	(0.012)
Border Distance	-0.014***	-0.030***	0.002	-0.011***	-0.015*	0.000
	(0.004)	(0.009)	(0.002)	(0.004)	(0.008)	(0.002)
Constant	2.434***	3.734***	1.458**	2.203**	6.319***	3.334***
	(0.752)	(0.968)	(0.600)	(0.967)	(1.466)	(0.768)
Observations	348	165	287	348	165	287
R-squared	0.352	0.573	0.458	0.319	0.533	0.371
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

organizations decreased on average by 0.859 percent points. Whereas, the region dummy appears insignificant, which suggests that there prevailed no difference in trust level of the urban and rural individuals. Additionally, though the magnitude of trust improved overtime. However, the estimate in panel B suggests that even after nine years later of conflict, the trust of conflict affected individuals on government organizations remained lower on average by 0.716 percent points as compared to control individuals. Like the earlier finding, here also the region dummy appears insignificant, which confirms that there been no difference between the two regions' trust on government institutions.

The earlier studies, such as Grosjean (2014) and Newton and Norris (2000) also report the same impact of conflict. The fall in trust on government organizations in conflict zone is attributed to a variety of factors. For instance, during conflict when the inhabitants face high physical and economic loss, they relate it to the failure of the government organizations to curb the rebellion movement. Similarly, they also downgrade the state institutions because their (state institutions) counter insurgency actions are often full of violence, which heavily cost the inhabitants (De Juan and Pierskalla, 2016).

The estimates of SRDD suggest that magnitude of trust on the government institutions varies across location of the individuals. The individuals that highly exposed to conflict exhibited comparatively high negative trust on government organizations (-0.299) than individuals in the moderately (-0.237), and least affected (-0.176) areas. Similarly, this trend prevailed over time. The estimates in panel B suggest that highly affected individuals even nine years later of conflict exhibited comparatively high negative trust on government organizations (-0.248) than individuals in the moderately (-0.207), and least affected (-0.150) areas.

Like out-group trust, the reduction in the level of trust on government organizations appears promising. During the conflict, the inhabitants of Swat experienced a hard time, as they were restricted by the so-called manipulated Islamic laws of militants. They faced severe sentences in case of any violation of the prescribed rules. In such a hard time, they (inhabitants) witnessed the failure of government organizations to restrict the power of militants and secure their interest. They further downgraded the state institutions, when they started negotiations with the militants' groups for a peace in the Swat. Additionally, when government organizations conducted a heavy military operation (Rah-e-Rast), the inhabitants faced a heavy socio-economic cost, particularly in the areas, which intensively exposed to the conflict. Consequently, the inhabitants showed negative trust on government organizations immediately and later on in the conflict zone.

1.5.1.4. Trust on Non-Government Organizations

After conflict, Swat become a focus region for various NGOs. Various local and international NGOs effectively participated in the rehabilitation process of the district. Unlike trust on government organizations, the trust on NGOs increased in post-conflict life. The tables 1.12 and 1.13 report the OLS and SRDD estimates of trust on NGOs in post-conflict life, respectively. The OLS estimate in panel A suggests that soon after the termination of conflict, the trust of the conflict-affected individuals on NGOs increased on average by 0.438 percent points as compared to the non-affected individuals. Similarly, panel B estimate depicts the same trend. The coefficient associated to conflict suggests that nine years later of conflict, the trust level of the conflict affected individuals remained high on average by 0.305 percent as compared to control individuals. Additionally, the regions dummy appears insignificant in both

Table 1.13: Trust on Non-Government Organizations (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.438***	0.437***	0.436***	0.438***	0.305***	0.305***	0.304***	0.305***
	(0.039)	(0.039)	(0.040)	(0.040)	(0.039)	(0.039)	(0.039)	(0.039)
Region Dummy	-0.006	-0.007	-0.002	-0.003	0.060	0.060	0.061	0.061
	(0.040)	(0.040)	(0.040)	(0.040)	(0.039)	(0.040)	(0.040)	(0.040)
Constant	2.492***	2.352***	2.263***	2.377***	2.318***	2.362***	2.217***	2.284***
	(0.032)	(0.357)	(0.401)	(0.411)	(0.031)	(0.544)	(0.573)	(0.577)
Observations	800	800	800	800	800	800	800	800
R-squared	0.135	0.136	0.146	0.147	0.076	0.076	0.079	0.081
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.12: Trust on Non-Government Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			**Bandwidth**		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.133***	0.157***	0.091***	0.109***	0.128***	0.059***
	(0.016)	(0.026)	(0.014)	(0.016)	(0.028)	(0.014)
Border Distance	0.008**	0.044***	-0.002	0.008***	0.032***	0.002
	(0.003)	(0.010)	(0.003)	(0.003)	(0.010)	(0.002)
Constant	2.298***	-0.781	2.216***	1.839**	0.145	2.646***
	(0.585)	(1.011)	(0.673)	(0.825)	(1.637)	(0.856)
Observations	348	165	287	348	165	287
R-squared	0.214	0.354	0.144	0.155	0.207	0.075
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

the time periods, which suggests that there been no difference in the level of trust on NGOs in urban and rural regions.

The above finding is compatible with the survey analysis of NGOs of Bosman (2012) in Syria. In post-war life, NGOs initiate a wide range of social and economic rehabilitation programs by largely including the common citizens. Consequently, such process develops their positive reputation among the citizens who suffered in conflict, thus leads to a higher trust on the NGOs.

Like the earlier discussion, to assess heterogeneous impact of conflict, we rely on SRDD estimates. The panel A estimates suggest that individuals that remained highly exposed to conflict exhibited comparatively high trust on NGOs (0.157) than the individuals in the moderately (0.133), and least affected (0.091) areas. The similar trend prevailed even nine years later of conflict. The individuals in the highly exposed region exhibited comparatively high trust (0.128) on NGOs as compared to the moderately (0.109) and least affected (0.059) regions' individuals.

The above findings are logical in case of district Swat. The conflict in the district worsened the socio-economic life of the inhabitants. Hence, there always remained a need of organizations that could help to rebuild and normalize the post-conflict life. Consequently, various local and international NGOs initiated various social welfare programs in the district. These organizations potentially worked in the education and health sector and endowed Swat with a new setup. They formed policies that largely incorporated the choices of local inhabitants. Additionally, they targeted the areas that were largely affected during the conflict. All these activities of the NGOs translated into a higher level of trust on them in post-conflict life.

1.5.2. Participation

1.5.2.1 Participation in Social Organizations

The tables 1.14 and 1.15 depict the change in participatory behaviors of the individuals in various social organizations in post-conflict life. The tables 1.14 and 1.15 report the OLS and SRDD estimates, respectively. Whereas, the panel A and B report the 2010 and 2018 participation level, respectively. The OLS estimate in panel A predicts that soon after the termination of conflict, the level of participation of the conflict-affected individuals in social organizations increased on average by 0.503 percent points as compared to the control individuals. Whereas, the region dummy appears insignificant which predicts that there happened no difference in the participation level of urban and rural regions' individuals. However, after nine years later of conflict, there occurred some reduction in the level of participation of the inhabitants in social organizations. Yet, the estimate in panel B suggests that participation in social organizations of the conflict-affected individuals remained high on average by 0.346 as compared to affected.

The above findings are supported by the prior studies such as Cassar *et al.* (2013), Bellows and Miguel (2009), Blattman (2009), which observed that exposure to conflict, elevated the level of participation in local groups in various countries. The participation in social organization increases because the conflict-affected individuals presumably have some ability to identify with whom they should interact that benefit them and secure their future interest. This result is also consistent with the view that exposure to conflict raise the level of prosocial behavior towards within-group members in the form of high participation in social organizations (Gáfaro *et al.,* 2014).

Unlike OLS estimates, the SRDD estimates confirm the heterogeneous impact of conflict. The panel A estimates suggest that individuals in highly exposed region

Table 1.14: Participation in Social Organizations (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.500***	0.499***	0.502***	0.503***	0.347***	0.346***	0.346***	0.346***
	(0.032)	(0.031)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Region Dummy	0.022	0.021	0.016	0.016	0.051	0.054	0.053	0.053
	(0.032)	(0.032)	(0.032)	(0.032)	(0.033)	(0.033)	(0.033)	(0.033)
Constant	2.396***	2.668***	2.625***	2.633***	2.218***	2.784***	2.704***	2.760***
	(0.024)	(0.286)	(0.316)	(0.327)	(0.024)	(0.449)	(0.469)	(0.472)
Observations	800	800	800	800	800	800	800	800
R-squared	0.242	0.244	0.246	0.246	0.130	0.135	0.136	0.137
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.15: Participation in Social Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			**Bandwidth**		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.133***	0.172***	0.118***	0.093***	0.133***	0.086***
	(0.013)	(0.022)	(0.010)	(0.013)	(0.025)	(0.011)
Border Distance	0.008***	0.048***	-0.002	0.012***	0.008	0.000
	(0.003)	(0.008)	(0.002)	(0.003)	(0.009)	(0.002)
Constant	3.039***	-1.040	2.159***	2.798***	1.973	2.825***
	(0.470)	(0.871)	(0.471)	(0.678)	(1.300)	(0.671)
Observations	348	165	287	348	165	287
R-squared	0.286	0.490	0.361	0.188	0.208	0.202
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

exhibited comparatively high average participation in social organizations (0.172), then moderately (0.133), and least affected (0.118) regions' individuals. Additionally, the same trend preserved over time. The panel B estimates in the table show that even after nine years later of conflict, the individuals in highly exposed area exhibited high average tendency towards social group participation (0.133) as compared to the individuals in the moderately (0.093) and least affected (0.086) regions.

The rise in the level of participation in social organizations is reasonable in case of Swat. The district Swat is traditionally endowing with various social organizations that assess various issues of the inhabitants and devise possible optimal solutions. These organizations include trade union or work related union, community associations, and Jirga. In the post-conflict period, the people of district Swat increased their participation in social organizations because such informal structure provided effective and costless solution to their disputes. Additionally, in post-conflict setting, the formal sanctioning mechanism remained ineffective due to imbalance of power among the state organizations. This situation further encouraged the inhabitants to participate in social organizations for fixing their existing problems.

1.5.2.2. Participation in Political Activities

The tables 1.16 and 1.17 report the OLS and SRDD estimates, respectively. Whereas, the panel A and B report the 2010 and 2018 participation level, respectively. The coefficient associated to conflict in all the specifications of the tables suggest that conflict elevated the individuals' level of participation in the political activities. The OLS estimate in panel A predicts that immediately after conflict, the political participation of the conflict-affected individuals increased on average by 0.413 percent points as compared to the control individuals. Whereas, the region dummy appears

Table 1.16: Participation in Political Activities (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.411***	0.410***	0.413***	0.413***	0.327***	0.329***	0.329***	0.330***
	(0.024)	(0.024)	(0.025)	(0.025)	(0.029)	(0.029)	(0.030)	(0.030)
Region Dummy	0.003	0.001	-0.001	-0.002	0.038	0.036	0.035	0.035
	(0.024)	(0.024)	(0.025)	(0.025)	(0.029)	(0.029)	(0.030)	(0.030)
Constant	2.232***	2.210***	2.169***	2.207***	2.078***	2.650***	2.697***	2.778***
	(0.019)	(0.222)	(0.247)	(0.255)	(0.021)	(0.372)	(0.400)	(0.396)
Observations	800	800	800	800	800	800	800	800
R-squared	0.269	0.272	0.275	0.276	0.140	0.142	0.143	0.148
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.17: Participation in Political Activities (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			**Bandwidth**		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.110***	0.151***	0.093***	0.094***	0.118***	0.070***
	(0.010)	(0.016)	(0.008)	(0.011)	(0.026)	(0.010)
Border Distance	0.004*	0.038***	-0.001	0.011***	0.036***	-0.005***
	(0.002)	(0.006)	(0.001)	(0.002)	(0.010)	(0.002)
Constant	2.421***	-0.403	1.872***	2.432***	0.584	2.967***
	(0.360)	(0.639)	(0.384)	(0.615)	(1.367)	(0.589)
Observations	348	165	287	348	165	287
R-squared	0.301	0.539	0.340	0.241	0.273	0.197
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

insignificant, which confirms that there prevailed no difference in the political behavior of urban and rural regions' individuals. Additionally, this positive trend in participation in political activities continued over time. For instance, the estimate in panel B suggests that after nine years later of conflict the participation of the individuals in political activities remained high on average by 0.330 percent points as compared to the control group. Whereas, no difference prevailed in the participation level of urban and rural individuals, as evident from the region dummy.

The above findings is supported by the earlier studies such as Gáfaro *et al.* (2014), Blattman (2009), Bellows and Miguel (2006, 2009), Carmil and Breznitz (1991). These studies documented that victimization during conflict increases political participation. The conflict literature explains two channels for such political change in a society. Firstly, the extraordinarily unsafe environment enhances the frequency of interactions of the individuals to coordinate actions to protect the region and politically resolve the urgent local need. Secondly, their concentration in camps during migration period may have involved in new administrative procedures such as "Compulsory Meetings" for the organization of daily life, which promotes their political sense and understanding.

The SRDD estimates confirm the heterogeneous impact of violence. The estimates in panel A depicts that the average participation in political activities of individuals in highly exposed area remained comparatively high (0.151) as compared to the individuals in the moderately (0.110) and least affected (0.093) areas' individuals. Furthermore, the same effect prevailed over time. The panel B estimates predict that even nine years later, the highly exposed individual revealed higher average political participation (0.118) than the moderately (0.094) and least affected (0.070) regions' individuals.

The above findings are promising in our case. The inhabitants of Swat faced intense conflict for years, which guided them to effectively participate in the political activities to solve their pressing issues. Similarly, they also exhibited high political participation because they believed that any deviation from constitutionally defined path might further escalate the violent movement in district. Additionally, the inhabitants of Swat during displacement as well as in post-conflict period were motivated by compulsory meetings of NGOs to be more political to obtain desired solution to their communal disputes and problems. These findings are more prominent for the individuals that resided in highly effected region as compared to moderately and least affected regions' individuals. This happens because they (highly exposed) consider political participation as more appropriate approach of normal life.

1.5.2.3. Participation in Government Organizations

The following tables 1.18 and 1.19 report the OLS and SRDD estimates of conflict on participation in government organizations, respectively. Whereas, the panel A and B report the 2010 and 2018 participation level, respectively. The coefficient associated to conflict in all the specifications of the tables depict that the occurrence of conflict adversely affected the level of participation in government organizations. For instance, the OLS estimate in panel A predicts that immediately after conflict, the participation level of conflict-affected individuals in government organizations decreased on average by 0.810 percent points. Whereas, the region dummy appears insignificant, which suggest that there prevailed no difference in the level of participation of the urban and rural regions' individuals. Additionally, the same trend prevailed over the time. The OLS estimate in panel B predicts that even nine years later of conflict, the average participation of individuals in government organizations remained lower on average by

Table 1.18: Participation in Government Organization (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	-0.808***	-0.809***	-0.811***	-0.810***	-0.596***	-0.598***	-0.598***	-0.596***
	(0.042)	(0.042)	(0.043)	(0.043)	(0.041)	(0.041)	(0.041)	(0.041)
Region Dummy	0.011	0.011	0.016	0.016	0.015	0.018	0.023	0.023
	(0.043)	(0.043)	(0.043)	(0.043)	(0.041)	(0.041)	(0.041)	(0.041)
Constant	3.093***	2.174***	2.072***	2.153***	3.164***	2.866***	2.928***	3.076***
	(0.035)	(0.381)	(0.406)	(0.421)	(0.035)	(0.563)	(0.602)	(0.602)
Observations	800	800	800	800	800	800	800	800
R-squared	0.319	0.324	0.330	0.330	0.212	0.213	0.217	0.224
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.19: Participation in Government Organization (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.216***	-0.288***	-0.156***	-0.176***	-0.227***	-0.096***
	(0.020)	(0.022)	(0.015)	(0.018)	(0.022)	(0.014)
Border Distance	-0.010***	-0.028***	0.004	-0.009**	-0.025***	-0.011***
	(0.003)	(0.008)	(0.003)	(0.004)	(0.008)	(0.003)
Constant	2.761***	4.091***	1.687**	2.995***	6.157***	3.608***
	(0.609)	(0.925)	(0.697)	(0.916)	(1.330)	(0.827)
Observations	348	165	287	348	165	287
R-squared	0.340	0.564	0.302	0.248	0.461	0.222
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

0.596 percent points than individuals in control district. Whereas, the region dummy appears insignificant, which suggest that there been no difference in the level of participation of the urban and rural regions' individuals over time.

The above finding is compatible with the study of Satyanath *et al.* (2013). The participation in government organizations decreases because the post-conflict period is marked as a period of transition and uncertainty. In conflict-affected zone, it is difficult for the inhabitants to believe on promises of the state organizations because their unpredictable moves and strategies contradict their own information. Similarly, in post-conflict life, the inhabitants set high expectations with regard to the improvement in lives, however, they always worry about the potential economic and physical loss in case armed conflict repeats (De Juan and Pierskalla, 2016). Hence, all such situations adversely affect the participatory behavior of individuals in government organizations.

Unlike OLS, the SRDD confirms heterogeneous impact of conflict shock. The estimates in panel A predict that immediately after conflict, the individuals in highly affected area exhibited lowest average participation in government organizations (-0.288), than moderately (-0.216), and least affected (-0.156) regions' individuals. The panel B estimates predict the same trend. After the nine years later of conflict, the individuals in highly exposed region exhibited comparatively lower participation in government organizations (-0.227), than moderately (-0.176) and least affected (-0.096) individuals in the region.

The above findings are relevant to our study area. In district Swat, various government organizations, such as local civil administration and law enforcement agencies interacted and arranged meeting with the local people to inform about various government strategies. However, the inhabitants avoided participation in government organization because of various reasons. For instance, the threat of targeted violence

stopped them for taking participation in state organizations because many citizens were targeted by militants for such activities. In addition, the formal institutions provided contradictory information about security issues and public good provision, which adversely affected the participation of the inhabitants in their meetings. Additionally, the individuals that remained highly exposed to conflict exhibited lower participation in government organizations as compared to the moderately and least affected areas because they remained more cautious about their economic and physical security than others did.

1.5.2.4. Participation in Non-Government Organizations

The following tables 1.21 and 1.22 depict the OLS and SRDD estimates, respectively. Whereas, the panel A and B report the 2010 and 2018 participation level, respectively. The findings reveal that exposure to conflict stimulated participation in NGOs. The OLS estimate in Panel A predicts that immediately after conflict, participation of the conflict-affected individuals in NGOs increased on average by 0.638 percent points as compared to non-victims. Whereas, the region dummy appears insignificant which suggests there prevailed no difference in the level of participation of the urban and rural individuals. Similarly, in panel B, the estimate suggests that nine years later of conflict, the participation of conflict affected individuals in NGOs remained high on average by 0.505 percent points. Additionally, like the earlier finding, the region dummy confirms that there prevailed no difference in the participation behavior of the urban and rural individuals over time.

The rise in the level of participation in NOGs happens because rebuilding and transformations of conflict-affected societies require a wide range of organizations. Whereas, the NGOs are considered potential actors that could transform the post-conflict life. The NGOs in post-conflict setting efficiently support local groups through

Table 1.20: Participation in Non-Government Organization (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.636***	0.635***	0.636***	0.638***	0.505***	0.507***	0.505***	0.505***
	(0.034)	(0.034)	(0.035)	(0.035)	(0.037)	(0.037)	(0.037)	(0.037)
Region Dummy	-0.024	-0.026	-0.027	-0.028	0.025	0.024	0.023	0.023
	(0.035)	(0.035)	(0.035)	(0.035)	(0.037)	(0.037)	(0.037)	(0.037)
Constant	2.393***	2.202***	2.121***	2.198***	2.025***	2.714***	2.585***	2.612***
	(0.024)	(0.336)	(0.348)	(0.360)	(0.026)	(0.534)	(0.546)	(0.550)
Observations	800	800	800	800	800	800	800	800
R-squared	0.301	0.303	0.311	0.311	0.195	0.197	0.206	0.206
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.21: Participation in Non-Government Organization (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.173***	0.235***	0.137***	0.135***	0.180***	0.107***
	(0.015)	(0.023)	(0.012)	(0.016)	(0.023)	(0.014)
Border Distance	0.005**	0.041***	-0.001	0.014***	0.045***	0.001
	(0.003)	(0.008)	(0.002)	(0.003)	(0.008)	(0.002)
Constant	2.247***	-1.173	2.150***	1.491*	-0.735	3.528***
	(0.535)	(0.781)	(0.603)	(0.836)	(1.291)	(0.809)
Observations	348	165	287	348	165	287
R-squared	0.328	0.582	0.322	0.238	0.453	0.217
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

strengthening the capacity of a society, empowering the key actors, and promoting organizational development programs (Parver and Wolf, 2008). Additionally, the NGOs in IDPs camps, and later in conflict zones motivate the inhabitants to engage in their compulsory meetings to take advantage of their services (De Luca and Verpoorten, 2011). These efforts thus motivate individuals to participate in NGOs meetings.

Additionally, to capture the heterogeneous impact of conflict, we rely on SRDD estimates. The SRDD estimates suggest that immediately, and even nine years later of conflict, the individuals in the highly exposed area exhibited comparatively high average participation in NGOs (0.235, 0.180) as compared to the individuals in the moderately (0.173, 0.135) and least affected (0.137, 0.107) regions.

The above findings are promising in case of district Swat. After conflict, the inhabitants of the district were in need of organizations that would helped them to recovery from shock. Consequently, various NGOs initiated different welfare programs in the district. These organizations specifically targeted the health and education sectors of the district and devised policies that encompass the choices of common inhabitants. Additionally, these organizations motivated the individuals to participate in their meeting to take advantage of their free services. Similarly, they targeted the highly affected areas in the Swat to rebuild and normalize life in such areas of the district. These measures of the NOGs motivated to inhabitants to effectively participate in their meeting to make sure quick recovery.

1.5.3. Cooperation

1.5.3.1. Within-Group Cooperation

The following tables 1.23 and 1.24 report the OLS and SRDD estimates, respectively. Whereas, the panel A and B report the 2010 and 2018 cooperation level, respectively. The coefficients associated to conflict in all the specification of the tables predict that exposure to shock elevated the level of within-group cooperation in a society. The OLS

Table 1.22 Within-Group Cooperation (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.591***	0.591***	0.596***	0.597***	0.422***	0.421***	0.422***	0.423***
	(0.027)	(0.027)	(0.028)	(0.028)	(0.025)	(0.025)	(0.025)	(0.025)
Region Dummy	-0.005	-0.006	-0.015	-0.016	0.015	0.017	0.011	0.011
	(0.028)	(0.028)	(0.028)	(0.028)	(0.025)	(0.025)	(0.025)	(0.025)
Constant	2.460***	2.656***	2.635***	2.670***	2.287***	2.574***	2.578***	2.639***
	(0.021)	(0.254)	(0.280)	(0.288)	(0.019)	(0.346)	(0.372)	(0.370)
Observations	800	800	800	800	800	800	800	800
R-squared	0.370	0.372	0.378	0.378	0.260	0.263	0.272	0.275
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.23: Within-Group Cooperation (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.161***	0.208***	0.130***	0.119***	0.155***	0.091***
	(0.012)	(0.017)	(0.009)	(0.011)	(0.015)	(0.009)
Border Distance	0.004**	0.037***	-0.001	0.008***	0.028***	-0.001
	(0.002)	(0.006)	(0.002)	(0.002)	(0.005)	(0.002)
Constant	3.191***	-0.689	2.279***	2.496***	0.047	2.986***
	(0.428)	(0.677)	(0.435)	(0.560)	(0.861)	(0.540)
Observations	348	165	287	348	165	287
R-squared	0.384	0.627	0.442	0.298	0.533	0.302
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

estimate in panel A predicts that immediately after conflict, the within-group cooperation among the conflict-exposed individuals increased on average by 0.597 percent points. Whereas, the region dummy appears insignificant which suggests there prevailed no difference in the level of within-group cooperation of the urban and rural regions' individuals. Additionally, the same trend observed over the time. The panel B estimate shows that after nine years later of conflict, the level of within-group cooperation of conflict-affected individuals remained high on overage by 0.423 percent points. Additionally, the region dummy appears insignificant, which suggests that there been no difference in level of within-group cooperation of the urban and rural individuals over time.

The prior studies such as Bauer *et al.,* (2016) and Silva and Mace (2015) documented same findings. The literature discusses various channels for this outcome. Firstly, the higher cooperation in a society guarantees higher social protection. Usually, the eruption of conflict results in destruction of households' assets and make sufferer more reliant on the existing informal setup of risk sharing to reduce the cost of conflict. Secondly, wartime time investment in human and physical capital is always risky, too expensive, and constrained as compared to the investment in the social capital. Consequently, conflict affected prefers to invest in social capital, which can be observed in group memberships, and another form of community support. Third, the post-conflict life is always associated with insecure property rights. Thus, investment in informal setup might be more valuable for such security (Bauer *et al.,* 2016).

Like the earlier analysis, we rely on the SRDD estimates to capture the heterogenous impact of conflict. The SRDD estimates in a panel A suggest that highly exposed individuals revealed higher average within-group cooperation (0.208) as compared to moderately (0.161) and least affected (0.130) regions' individuals.

Interestingly, the same pattern prevailed over time. For instance, the panel B estimates show that nine years later of conflict highly exposed individuals revealed comperatively high average cooperation (0.155), as compared to the moderately (0.119) and least affected (0.091) regions' individuals.

The above findings appear reasonable in case of district Swat. As discussed earlier, the inhabitants of district Swat are guided by the principles of Pakhtunwali code of conduct, which motivate them to extend their support to own community members in the times of adversities. The within-group members encompass the socio-economic support from family members, relatives, friends, neighborhoods, and community leaders. During conflict period, the inhabitants of the district faced huge socio-economic cost. In order to reduce the loss, stabilize life, and minimize the likelihood of external threats, the inhabitants of the district extended their support towards other in-group members. The within-group support prevailed over time because conflict shock remains persistent in the memories of the individuals exposed to conflict which further keep them bind in a high social and economic support. Additionally, such social and economic support prevailed high among the individuals in a highly exposed region than individuals in the moderately, and least affected. This happened because they need stronger bond to ensure the physical and economic security and normalize the life in region.

1.5.3.2. Collective Problem Solution

The following tables 1.25 and 1.26 depict the OLS and SRDD estimates, respectively. Whereas, the panel A and B report the 2010 and 2018 cooperation level, respectively. The coefficients associated to conflict predict that exposure to conflict stimulated the inhabitants to collectively formulate strategies to solve the underlined communal

Table 1.24: Collective Problem Solution (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.484***	0.483***	0.484***	0.486***	0.339***	0.339***	0.339***	0.340***
	(0.035)	(0.035)	(0.036)	(0.035)	(0.029)	(0.029)	(0.029)	(0.029)
Region Dummy	-0.000	-0.003	-0.002	-0.002	0.046	0.047	0.046	0.046
	(0.035)	(0.035)	(0.036)	(0.036)	(0.029)	(0.029)	(0.029)	(0.029)
Constant	2.291***	2.136***	2.093***	2.202***	1.992***	1.835***	1.846***	1.888***
	(0.028)	(0.323)	(0.357)	(0.372)	(0.022)	(0.414)	(0.430)	(0.429)
Observations	800	800	800	800	800	800	800	800
R-squared	0.195	0.197	0.203	0.204	0.152	0.152	0.154	0.155
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.25: Collective Problem Solution (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			**Bandwidth**		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.135***	0.176***	0.108***	0.097***	0.128***	0.076***
	(0.014)	(0.023)	(0.012)	(0.012)	(0.020)	(0.010)
Border Distance	0.007**	0.050***	-0.003	0.006***	0.037***	-0.000
	(0.003)	(0.009)	(0.002)	(0.002)	(0.007)	(0.002)
Constant	2.204***	-1.049	2.040***	1.367**	-1.333	2.954***
	(0.519)	(0.955)	(0.578)	(0.625)	(1.225)	(0.655)
Observations	348	165	287	348	165	287
R-squared	0.252	0.454	0.237	0.184	0.367	0.186
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

problems. The OLS estimate in panel A shows that immediately after conflict, the average efforts level of the conflict affected individuals for the collective problems solution increased on average by 0.486 percent points as compared to non-affected individuals. Whereas, region dummy depicts that there prevailed no difference in the efforts of the urban and rural individuals. Similarly, the estimate in panel B shows that nine years later of conflict, efforts level of the conflict affected individuals for collective action problems remained high on average by 0.340 percent points. Additionally, the region dummy appears insignificant, which suggests that there been no difference in the cooperation level of the urban and rural individuals over time.

The rise in the level of efforts for collective problems solution occurs because exposure to conflict induces positive change in the belief structure of the individuals, which make them more prosocial. Alternatively, when a large number of community individuals exposes to conflict, the community as whole try to adopt a more prosocial equilibrium (Bauer *et al.,* 2016). The prosocial transformation in the behavior of the individuals besides other changes such as joining social groups also motivates the individuals for the solution of actual problems of the community. For instance, Bellows and Miguel (2006) note that besides other behavioral changes, conflict victims involve in "road brushing", i.e., a local infrastructure maintenance activity.

Unlike OLS, the SRDD estimates confirm heterogeneous impacts of conflict. The estimates in panel A and B suggest that highly exposed individuals in the region showed higher average efforts level for the collective problems solution (0.176, 0.128) than the moderately (0.135, 0.97) and least affected (0.108, 0.076) regions' individuals respectively.

The above findings appear logical as for the social structure of district Swat is concerned. In the post-conflict period, inhabitants faced various social problems that

required urgent solution for a normal life. The main problems, which the inhabitants faced, were related to health, education, and property right. As such institutions were ruined by the militants in the district. In order to solve these issues, various organization such as community association, trade union, and Jirga issued certain guidelines to the local people. The inhabitants largely followed these guidelines as they were intended to live a normal after such a large shock. The given effect is more clear from the behavior of the highly affected areas' individuals as they remained more cautious about their post-conflict recovery, followed by the moderately and least affected individuals.

1.5.3.3. Cooperation with Government Organizations

The following tables 1.27 and 1.28 depict the OLS and SRDD estimates, respectively. Whereas, the panel A and B report the 2010 and 2018 cooperation level, respectively. The findings suggest that occurrence of conflict-impaired cooperation with government organizations. The OLS estimate in panel A depicts that soon after the conflict, the level of cooperation of the conflict-affected individuals decreased with government organizations on average by 0.705 percent points as compared to the non-victims. Whereas, the region dummy appears insignificant, which indicates that there happened no difference in the cooperation behavior of urban and rural regions' individuals. Similarly, the estimate in panel B suggests that nine years later of conflict, though there happened some improvement, however, the cooperation level of the conflict affected individuals with state organizations remained lower on average by 0.552 as compared to the control individuals. Additionally, as evident from the region dummy, occurred no difference in the urban and rural regions over time.

There is various explanation for the above findings. Firstly, the victimizations in the conflict adversely affect individuals' expectations about state institutions (Grosjean, 2014). Secondly, due to uncertain situation inhabitants never prefer to

Table 1.26: Cooperation with Government Organization (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	-0.707***	-0.708***	-0.707***	-0.705***	-0.553***	-0.553***	-0.553***	-0.552***
	(0.040)	(0.039)	(0.040)	(0.040)	(0.034)	(0.034)	(0.034)	(0.034)
Region Dummy	-0.015	-0.016	-0.013	-0.014	-0.047	-0.048	-0.043	-0.042
	(0.040)	(0.040)	(0.040)	(0.040)	(0.034)	(0.034)	(0.034)	(0.034)
Constant	3.184***	2.151***	2.105***	2.219***	3.389***	3.139***	3.114***	3.225***
	(0.030)	(0.361)	(0.391)	(0.409)	(0.027)	(0.480)	(0.497)	(0.495)
Observations	800	800	800	800	800	800	800	800
R-squared	0.288	0.296	0.301	0.302	0.255	0.256	0.260	0.266
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.27: Cooperation with Government Organization (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.201***	-0.250***	-0.136***	-0.159***	-0.208***	-0.103***
	(0.018)	(0.021)	(0.013)	(0.015)	(0.018)	(0.012)
Border Distance	-0.015***	-0.035***	0.003	-0.006*	-0.012	0.002
	(0.004)	(0.008)	(0.002)	(0.003)	(0.007)	(0.002)
Constant	1.795*	3.177***	2.292***	1.243	3.974**	4.180***
	(0.978)	(1.192)	(0.863)	(1.428)	(1.919)	(1.298)
Observations	348	165	287	348	165	287
R-squared	0.348	0.552	0.340	0.260	0.527	0.226
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

cooperate with government organizations because they feel fear for their physical security in case armed conflict returns (De Juan and Pierskalla, 2016). Consequently, the people instead of extending their support to any warring group, avoid civic activities and keep themselves limited to family networks (Kalyvas, 2006; Korf, 2004).

The SRDD estimates suggest heterogeneous impact of conflict. The Panel A estimates suggest that individuals in the highly affected region exhibited comparatively lower average cooperation with the government organizations (-0.250) than the moderately (-0.201), and least affected (0.136) regions' individuals. Similarly, the estimates in the panel B of the table predict that nine years later of conflict the highly exposed individuals in the region preferred comparatively lower average cooperation with government organizations (-0.208), than moderately (-0.159), and least affected (-0.103) regions' people.

The above findings are promising as for the case of district Swat is concerned. To restore peace in district, the state organizations used various strategies. They initially conducted a small-scale operation against militants, then started a peace talk, and later, used a heavy military operation (operation Rah-e-Rast) to establish the writ of the state and clear the area from the militants. However, all situation resulted into a higher socio-economic cost for the local people. Consequently, the inhabitants preferred to avoid the government organizations and not extend their support towards them. They might have perceived it as a best strategy to reduce loss and ensure physical security in case the conflict occurs, because as in post-conflict period various hided militants targeted various individuals that supported government organizations. Additionally, the highly affected individuals exhibited lower cooperation to government organizations, followed by comparatively and least affected regions individuals. This happened

because the individuals in the highly affected are remained more cautious about their security than other regions' individuals.

1.5.3.4. Cooperation with Non-Government Organizations

The following tables 1.29 and 1.30 depict the OLS and SRDD estimates of the impact of conflict on cooperation with NGOs, respectively. Unlike the cooperation with formal state organizations, the occurrence of conflict increased the level of cooperation with NGOs. The OLS estimate in panel A shows that immediately after conflict the average cooperation of the conflict affected individuals with NGOs increased on average by 0.409 percent points. Whereas, the region dummy appears insignificant, which suggests that behavior of urban and rural regions individuals in terms of cooperation with government organizations remained the same. Additionally, though the magnitude of cooperation with NGOs reduced over time. However, panel B estimate suggest that average cooperation with NGOs of the conflict-affected individuals remained high on average by 0.306 percent points then non-affected individuals.

The inhabitants extend their cooperation to NGOs because such organizations mainly aim to rebuild a war-torn society through various strategies like promote the capacity of the society, endow the key actors with new ideas, and promote organizational programs (Parver and Wolf, 2008). Additionally, the NGOs increase their activities in response to the humanitarian crises. Alternatively, they form strategies that help that conflict affected individuals to quickly recover from the conflict shock (De Luca and Verpoorten, 2011).

The SRDD estimates suggest that impact of conflict varies across the location of the individuals. The estimates in panel A show that soon after conflict, the highly exposed individuals exhibited higher average cooperation (0.138) with NGOs as compared to the moderately (0.117), and least affected (0.094) regions' individuals.

Table 1.28: Cooperation with Non-Government Organizations (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.408***	0.408***	0.409***	0.409***	0.302***	0.306***	0.306***	0.306***
	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Region Dummy	0.014	0.012	0.012	0.011	0.044	0.041	0.040	0.040
	(0.032)	(0.032)	(0.032)	(0.032)	(0.033)	(0.033)	(0.033)	(0.033)
Constant	2.665***	2.828***	2.766***	2.785***	2.488***	3.671***	3.620***	3.661***
	(0.026)	(0.282)	(0.327)	(0.333)	(0.025)	(0.442)	(0.490)	(0.491)
Observations	800	800	800	800	800	800	800	800
R-squared	0.175	0.176	0.180	0.180	0.103	0.111	0.112	0.113
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 1.29: Cooperation with Non-Government Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.117***	0.138***	0.096***	0.088***	0.109***	0.079***
	(0.013)	(0.022)	(0.011)	(0.013)	(0.022)	(0.011)
Border Distance	0.007***	0.041***	-0.001	0.013***	0.032***	-0.001
	(0.003)	(0.008)	(0.002)	(0.003)	(0.008)	(0.002)
Constant	3.028***	-0.473	2.393***	3.354***	1.822	3.359***
	(0.472)	(0.867)	(0.514)	(0.713)	(1.227)	(0.676)
Observations	348	165	287	348	165	287
R-squared	0.232	0.385	0.240	0.179	0.270	0.183
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

The above findings are relevant to our study area. The NGOs in post-conflict setting devised various social welfare policies that helped the inhabitants to recover from the shock. The NGOs focused and rehabilitated the education and health sectors of the district. They valued the preferences of inhabitants in the implementation of any program. Therefore, the inhabitants preferred to extend their help towards the NGOs to support their policies and help them in execution of policies. Additionally, the higher level of cooperation appeared in highly affected areas relative to moderate and least affected. This happened because the highly affected gains more from the policies of these organizations as compared to moderately and least affected.

1.6. Conclusion

The aim of this study was to investigate the institutional legacy of conflict that occurred in the district Swat of Khyber Pakhtunkhwa (KP), Pakistan. The study considered three different forms of informal institutions; namely, trust, participation, and cooperation. To comprehensively study informal structure, we assessed various possible dimensions of each of the informal institutions. Additionally, to explore the causal links, we identified district Buner – a neighboring district as a control group. We collected the primary data from 400 households in each district and applied the Ordinary Least Square (OLS) and Spatial Regression Discontinuity (SRDD) estimation techniques. Our findings suggested that institutions are endogenous to exogenous shocks, i.e. when institutions expose to a conflict shock; they (institutions) adopt a new equilibrium path. The findings about trust exhibited that conflict adversely affected out-group trust and trust on government organizations. However, it positively caused the within-group trust and trust on non-government organizations. Similarly, conflicted promoted participation in social organizations, participation in political activities, and participation in non-government organizations. However, it lowered participation in

formal government organizations. Finally, the occurrence of war enhanced within-groups cooperation, efforts for collective problems solution, and cooperation with non-government organizations. Yet, it adversely caused cooperation with government organizations.

Additionally, supporting the OLS findings, the SRDD findings suggest that the intensity of change in trust, participation, and cooperation varies across the location of the individuals. Alternatively, the individuals in highly exposed area exhibited comparatively high changes in trust, participation, and cooperation than the moderately and least affected areas' individuals.

The analysis suggests that conflict shock drives a pro-social transformation, yet it has also adverse consequences, specifically related to public organizations, which could be costly, if not considered properly. Hence, to avoid unfavorable outcomes, the government whenever devise polices regarding conflict-affected regions should value the demands of the local people and include them in decision-making process.

Reference

Acemoglu, D., & Robinson, J. A. (2013). Why Nations fail-the origins of power, prosperity and poverty. ld Econo, 2, 118-121.

Angrist, J., & Krueger, A. B. (1994). Why do World War II veterans earn more than nonveterans?. Journal of labor economics, 12(1), 74-97.

Angrist, J. D., & Lavy, V. (1999). Using Maimonides' rule to estimate the effect of class size on scholastic achievement. The Quarterly Journal of Economics, 114(2), 533-575.

Arjona, A. (2014). Wartime Institutions A Research Agenda. Journal of Conflict Resolution, 58(8), 1360-1389.

Arjona, A. (2010). "Social Order in Civil War." PhD diss. Yale University, New Haven, CT.

Aron, J. (2003). Building institutions in post-conflict African economies. Journal of International Development, 15(4), 471-485.

Austin, G. (2008). The 'reversal of fortune' thesis and the compression of history: Perspectives from African and comparative economic history. Journal of international development, 20(8), 996-1027.

Avis, W. (2016). Drivers of conflict in the Swat Valley, Pakistan.

Bateson, R. (2012). Crime victimization and political participation. American Political Science Review, 106(3), 570-587.

Bateson, R. (2015). How Local Institutions Emerge from Civil War.

Balcells, L. (2012). The consequences of victimization on political identities: Evidence from Spain. Politics & Society, 40(3), 311-347.

Bauer, M., Cassar, A., Chytilová, J., & Henrich, J. (2014). War's enduring effects on the development of egalitarian motivations and within-group biases. Psychological science, 25(1), 47-57.

Bauer, M., Blattman, C., Chytilová, J., Henrich, J., Miguel, E., & Mitts, T. (2016). Can war foster cooperation?. Journal of Economic Perspectives, 30(3), 249-74.

Bayer, P., Ferreira, F., & McMillan, R. (2007). A unified framework for measuring preferences for schools and neighborhoods. Journal of political economy, 115(4), 588-638.

Becchetti, L., Conzo, P., & Romeo, A. (2014). Violence, trust, and trustworthiness: evidence from a Nairobi slum. Oxford Economic Papers, 66(1), 283-305.

Bellows, J., & Miguel, E. (2006). War and institutions: New evidence from Sierra Leone. American Economic Review, 96(2), 394-399.

Bellows, J., & Miguel, E. (2009). War and local collective action in Sierra Leone. Journal of public Economics, 93(11-12), 1144-1157.

Besley, T., Mueller, H., & Singh, P. (2011). Conflict and investment. In Note prepared for the IGC Workshop on Fragile States. Oxford, UK: St Anne's College, Oxford University.

Bircan, C,. Brück, T., & Vothknecht, M. (2017). Violent conflict and inequality. Oxford Development Studies, 45(2), 125-144.

Black, S. E. (1999). Do better schools matter? Parental valuation of elementary education. The Quarterly Journal of Economics, 114(2), 577-599.

Blattman, C. (2009). From violence to voting: War and political participation in Uganda. American political Science review, 103(2), 231-247.

Blattman, C., & Miguel, E. (2010). Civil war. Journal of Economic literature, 48(1), 3-57.

Blattman, C. (2010). Post-conflict recovery in Africa: the micro level. entry for the.

Blattman, C., Hartman, A. C., & Blair, R. A. (2014). How to promote order and property rights under weak rule of law? An experiment in changing dispute resolution behavior through community education. American Political Science Review, 108(1), 100-120.

Bosman, M. (2012). The NGO Sector in Syria: An Overview. Universität-und Landesbibliothek Sachsen-Anhalt.

Bowles, S. (2008). Being human: Conflict: Altruism's midwife. Nature, 456(7220), 326.

Bozzoli, C., Brück, T., & Muhumuza, T. (2011). Activity Choices of Internally Displaced Persons and Returnees: Quantitative Survey Evidence from Post-

War Northern Uganda (No. 1134). DIW Berlin, German Institute for Economic Research.

Brakman, S., Garretsen, H., & Schramm, M. (2004). The strategic bombing of German cities during World War II and its impact on city growth. Journal of Economic Geography, 4(2), 201-218.

Carmil, D., & Breznitz, S. (1991). Personal Trauma and World View—Are extremely stressful experiences related to political attitudes, religious beliefs, and future orientation?. Journal of Traumatic stress, 4(3), 393-405.

Cassar, A., Grosjean, P., & Whitt, S. (2013). Legacies of violence: trust and market development. Journal of Economic Growth, 18(3), 285-318.

Cassar, A., Grosjean, P. A., & Whitt, S. (2011). Civil war, social capital and market development: Experimental and survey evidence on the negative consequences of violence. Social Capital and Market Development: Experimental and Survey Evidence on the Negative Consequences of Violence (November 10, 2011). UNSW Australian School of Business Research Paper, (2011ECON14).

Çelebi, E., Verkuyten, M., Köse, T., & Maliepaard, M. (2014). Out-group trust and conflict understandings: The perspective of Turks and Kurds in Turkey. International Journal of Intercultural Relations, 40, 64-75.

Choi, J. K., & Bowles, S. (2007). The coevolution of parochial altruism and war. Science, 318(5850), 636-640.

Collier, P., Elliott, V. L., Hegre, H., Hoeffler, A., Reynal-Querol, M., & Sambanis, N. (2003). Breaking the Conflict Trap: Civil War and Development Policy. World Bank Publications.

Collier, P. (1999). On the economic consequences of civil war. Oxford economic papers, 51(1), 168-183.

Collier, P. (2003). Breaking the conflict trap: Civil war and development policy. World Bank Publications.

Czaika, M., & Kis-Katos, K. (2009). Civil conflict and displacement: village-level determinants of forced migration in Aceh. Journal of Peace Research, 46(3), 399- 418.

Cecchi, F., Leuveld, K., Voors, M., & van der Wal, L. (2015). Civil War Exposure and Competitiveness: Experimental Evidence from the Football Field in Sierra Leone. Accessed November, 13.

Davis, D. R., & Weinstein, D. E. (2002). Bones, Bombs, and Break Points: The Geography of Economic Activity. In American Economic Review.

de Blasio, G., & Poy, S. (2014). The impact of local minimum wages on employment: evidence from Italy in the 1950s (No. 953). Bank of Italy, Economic Research and International Relations Area.

De Juan, A., & Pierskalla, J. H. (2016). Civil war violence and political trust: Microlevel evidence from Nepal. Conflict Management and Peace Science, 33(1), 67-88.

De Luca, G., & Verpoorten, M. (2011). From vice to virtue? Civil war and social capital in Uganda (No. 298). LICOS Discussion Paper.

DeRouen Jr, K. R., & Bercovitch, J. (2008). Enduring internal rivalries: A new framework for the study of civil war. Journal of Peace Research, 45(1), 55-74.

Engel, S., & Ibáñez, A. M. (2007). Displacement due to violence in Colombia: A household-level analysis. Economic Development and Cultural Change, 55(2), 335-365.

Gáfaro, M., Ibáñez, A. M., & Justino, P. (2014). Local Institutions and Armed Group Presence in Colombia (No. 178). Households in Conflict Network.

Gambetta, D. (1996). The Sicilian Mafia: the business of private protection. Harvard University Press.

Gilligan, M. J., Pasquale, B. J., & Samii, C. (2014). Civil war and social cohesion: Lab-in-the-field evidence from Nepal. American Journal of Political Science, 58(3), 604-619.

Gizelis, T. I., & Kosek, K. E. (2005). Why humanitarian interventions succeed or fail the role of local participation. Cooperation and Conflict, 40(4), 363-383.

Grosjean, P. (2014). Conflict and social and political preferences: Evidence from World War II and civil conflict in 35 European countries. Comparative Economic Studies, 56(3), 424- 451.

Gutiérrez Sanín, F., & Barón, M. (2005). Re-stating the state: Paramilitary territorial control and political order in Colombia (1978-2004).

Hilali, A. (2009). Swat's Worst Humanitarian Crisis'. The Frontier Post.

Hutchison, M. L., & Johnson, K. (2011). Capacity to trust? Institutional capacity, conflict, and political trust in Africa, 2000–2005. Journal of Peace Research, 48(6), 737-752.

Ikenberry, G. J. (2009). After victory: Institutions, strategic restraint, and the rebuilding of order after major wars. Princeton University Press.

Jakiela, P., & Ozier, O. (2015). The impact of violence on individual risk preferences: evidence from a natural experiment (No. 7440). The World Bank.

Justino, P. (2009). Poverty and violent conflict: A micro-level perspective on the causes and duration of warfare. Journal of Peace Research, 46(3), 315-333.

Justino, P. (2012). Shared societies and armed conflict: Costs, inequality and the benefits of peace. IDS Working Papers, 2012(410), 1-23.

Justino, P., Leone, M., & Salardi, P. (2013). Short-and long-term impact of violence on education: The case of Timor Leste. The World Bank Economic Review, 28(2), 320- 353.

Kalyvas, S. N. (2006). The logic of violence in civil war. Cambridge University Press.

Kalyvas, S. N., & Kocher, M. A. (2007). Ethnic cleavages and irregular war: Iraq and Vietnam. Politics & Society, 35(2), 183-223.

Kalyvas, S. N., Shapiro, I., & Masoud, T. E. (Eds.). (2008). Order, conflict, and violence (p. 397). Cambridge: Cambridge University Press.

Kalyvas, S. N., & Balcells, L. (2010). International system and technologies of rebellion: How the end of the Cold War shaped internal conflict. American Political Science Review, 104(3), 415-429.

Kaplan, O. R. (2010). Civilian Autonomy in Civil War (Doctoral dissertation, Stanford University).

Korf, B. (2004). War, livelihoods and vulnerability in Sri Lanka. Development and Change, 35(2), 275-295.

Kronstadt, K. A. (2010). Pakistan: Key current issues and developments. Library of congress Washington dc congressional research service.

Leon, G. (2012). Civil conflict and human capital accumulation the long-term effects of political violence in perú. Journal of Human Resources, 47(4), 991-1022.

Lee, D. S., & Lemieux, T. (2010). Regression discontinuity designs in economics. Journal of economic literature, 48(2), 281-355.

Ghani, A., & Lockhart, C. (2009). *Fixing failed states: A framework for rebuilding a fractured world*. Oxford University Press.

Malasquez, E. A. (2016). Does conflict undermine social capital? Long-run evidence from Peru.

Miguel, E., & Roland, G. (2011). The long-run impact of bombing Vietnam. Journal of development Economics, 96(1), 1-15.

Milliken, J., & Krause, K. (2002). State failure, state collapse, and state reconstruction: concepts, lessons and strategies. Development and change, 33(5), 753-774.

Mironova, V., & Whitt, S. (2018). Social norms after conflict exposure and victimization by violence: Experimental evidence from Kosovo. British Journal of Political Science, 48(3), 749-765.

Melander, E., Pettersson, T., & Themnér, L. (2016). Organized violence, 1989–2015. Journal of Peace Research, 53(5), 727-742.

Moore, C. (2015). A Spatial Regression Discontinuity Evaluation of Minnesota's Quality Compensation for Teachers Program.

Newton, K., & Norris, P. (2000). Confidence in public institutions. Disaffected democracies. What's troubling the trilateral countries.

Olson, M. (1993). Dictatorship, Democracy, and Development. American Political Science Review, 87(03), 567-576.

Ostrom, E. (2015). Governing the commons. Cambridge university press.

Orakzai, S. B. (2011). Conflict in the Swat Valley of Pakistan: Pakhtun culture and peacebuilding theory-practice application. Journal of Peacebuilding & Development, 6(1), 35-48.

Parkinson, S. E. (2013). Organizing rebellion: Rethinking high-risk mobilization and social networks in war. American Political Science Review, 107(3), 418-432.

Parver, C., & Wolf, R. (2008). Civil Society's Involvement in Post-Conflict Peacebuilding. Int'l J. Legal Info. 36, 51.

Primoratz, I. (2005, March). Civilian immunity in war. In The Philosophical Forum (Vol. 36, No. 1, pp. 41-58). Blackwell Publishing Ltd.

Petersen, R. D. (2001). Resistance and rebellion: lessons from Eastern Europe. Cambridge University Press.

Rome, S. (2008), 'Women's Right to Land Ownership in Swat State Area: The Swat State Area and Post-state Scenario' in Pakistan Vision 8: 2: 116-141.

RRT (Refugee Review Tribunal). (2009). RRT Research Response Number: PAK35534, Pakistan. Date: 19th October

Riley, D. (2005). Civic associations and authoritarian regimes in interwar Europe: Italy and Spain in comparative perspective. American Sociological Review, 70(2), 288-310.

Rohner, D., Thoenig, M., & Zilibotti, F. (2013). Seeds of distrust: Conflict in Uganda. Journal of Economic Growth, 18(3), 217-252.

Roggio, B. (2007). Pakistan releases Taliban leader Sufi Mohammed. Long War Journal.

Roggio, B. (2009). Pakistan to end military operation and implement sharia in Malakand Division. The Long War Journal.

Sacks, A., & Larizza, M. (2012). Why quality matters: rebuilding trustworthy local government in post-conflict Sierra Leone. The World Bank.

Shewfelt, S. D. (2009). Legacies of War: Social and Political Life After Wartime Trauma PhD thesis Yale University.

Siddique, Q. (2010). Tehrik-e-Taliban Pakistan: An attempt to deconstruct the umbrella organization and the reasons for its growth in Pakistan's north-west (No. 2010: 12). DIIS Report.

Siddique, Q. (2008). The Red Mosque operation and its impact on the growth of the Pakistani Taliban.

Silva, A. S., & Mace, R. (2015). Inter-group conflict and cooperation: Field experiments before, during and after sectarian riots in Northern Ireland. Frontiers in Psychology, 6, 1790.

Sivakumaran, S. (2009). . Identifying An Armed Conflict Not Of An International Character. In The Emerging Practice of the International Criminal Court (pp. 361-380). Brill Nijhoff.

Skocpol, T. (1992). Protecting soldiers and mothers (Vol. 992). Cambridge, MA: Harvard University Press.

Staub, E. (2012). Genocide, mass killing, and violent conflict: Prevention and reconciliation. In The Oxford handbook of intergroup conflict.

Taylor, B. D., & Botea, R. (2008). Tilly Tally: War-Making and State-Making in the Contemporary Third World. International Studies Review, 10(1), 27-56.

Thistlethwaite, D. L., & Campbell, D. T. (1960). Regression-discontinuity analysis: An alternative to the ex post facto experiment. Journal of Educational psychology, 51(6), 309.

Tilly, C. (1985). War making and state making as organized crime. Violence: A reader, 35-60.

Van der Klaauw, W. (2002). Estimating the effect of financial aid offers on college enrollment: A regression–discontinuity approach. International Economic Review, 43(4), 1249- 1287.

Voors, M. J., & Bulte, E. H. (2014). Conflict and the evolution of institutions: Unbundling institutions at the local level in Burundi. Journal of Peace Research, 51(4), 455-469.

Voors, M. J., Nillesen, E. E., Verwimp, P., Bulte, E. H., Lensink, R., & Van Soest, D. P. (2012). Violent conflict and behavior: a field experiment in Burundi. American Economic Review, 102(2), 941-64.

Werner, K. (2016). Whom do people trust after a violent conflict? Experimental evidence from Maluku, Indonesia (Vol. 73, No. 16). Passauer Diskussionspapiere-Volkswirtschaftliche Reihe.

Wood, R. M. (2010). Rebel capability and strategic violence against civilians. Journal of Peace Research, 47(5), 601-614.

Weidmann, N. B., & Zürcher, C. (2013). How Wartime Violence Affects Social Cohesion: The Spatial–Temporal Gravity Model. Civil Wars, 15(1), 1-18.

Whitt, S., & Wilson, R. K. (2007). The dictator game, fairness and ethnicity in postwar Bosnia. American Journal of Political Science, 51(3), 655-668.

Wickham-Crowley, T. P. (1992). Guerrillas and revolution in Latin America: A comparative study of insurgents and regimes since 1956. Princeton University Press.

Chapter 2

Violent Conflict and Religious Preferences

2.1. Introduction

The development and the growth trajectory of a society are perceived conditional to the endowments structure, institutional arrangements, and policy outlooks. However, in such setting religion claims an essential part.[28] For instance, historical evidences suggest that religion has been considerably shaped human civilization and development path (Fase, 2005). Recently, the academicians and practitioners have devoted greater interest to the role of religion in the process of economic development.[29] The role of religion into contemporary development discourse has risen because contrary to the arguments of secularization and modernization ideas, the role of religion has not disappeared from the masses life.[30] In fact the religious movements and faith-based groups have proliferated during the last decade (Kirmani, 2008).

Usually, an effective legal system is considered responsible for social stability. However, a systematic analysis of history suggests that legislative measures based on common law remained an effective strategy to ensure social order and growth of development (Walker, 2000). Perhaps, this discussion suggests that religion as an institute is the utmost structure that matters. Hence, the role of religion ought to be incorporated in the spheres of institutions, with its own values and norms.

[28]"Religion involves an aggregation of human attitudes, beliefs, and actions in the face of two types of experience – the experience of the supernatural and the experience of the sacred (Berger, 1992)."

[29] For a long time, the lack of explicit inclusion of religion into development research largely reflected the insufficient religious knowledge of development agencies, and the inappropriate analytical tools to understand that religious dimension remain ommited (Rakodi, 2012).

[30] The basic fundamental structure of religion has not changed even in the modern times, rather transformation in the society; contents and beliefs system has been experienced. For detail discussion, see also Fox (1998).

However, in contemporary political and academic discourse, the nexus between religion and conflict has become a greater concern. A growing body of conflict-literature inquires the religious aspects of various conflict events.[31] It is believed that conflicts which are based on religious intolerance or inaptness have been resulted in longer duration and higher physical and financial loss (Toft, 2006 and Fox, 2005).[32] Consequently, theree different approaches explain different aspects of religion and conflict. For instance, the 'Ambivalence of Religion' view suggests that it is religion that promote peace and conflict in a society. The 'Clash of Civilization' hypothesis predicts that globally the tension of conflict is religiously motivated. Finally, the 'Fundamentalism' hypothesis explains that each major world religions include some ragid religious beliefs that incite fundamentalism, violence, and armed conflict.

Beyond suspicion, religion as an institution is seen more rigid and culturally less heterogeneous (Bénabou *et al.,* 2013). In fact, change in religious beliefs is a complex process, whether it is from individual or society perspective (Wadsworth and Freeman, 1983). However, shocks could alter the religious activities and beliefs system (Ben-Ezra *et al.,* 2010; Baumeister, 1991; Frankl, 1963). In life, various events such strongly influence the beliefs system that it requires some amendments. Therefore, when shocks occur and current beliefs could not offer a satisfactory explanation; individuals search for alternative explanations or adopt new belief system (Albrecht and Cornwall, 1989).

Throughout history, the occurrence of traumatic events has driven religious transformation. The hostile conflicts and natural disorders have been resulted in

[31] For detail discussion see also Svensson and Nilsson (2018), Finnbogason and Svensson (2018), Vüllers (2015), and Gunning and Jackson (2011).

[32] The percentage of conflict encompassing religious incompatibility has increased from 1940 to 2000 (Toft, 2006).

influential new movements in religion, such as paradigm shifts in religious consciousness, perfervid revivalism, awakening, and apocalyptic expectations. These shocks have created entirely new dimensions in religion (Jenkins, 2014).[33] Consequently, the beliefs system and religious activities of the individuals never remain constant. However, the change in beliefs for some individuals appear more abrupt, while for others the change remain modest (Albrecht and Cornwall, 1989).[34] For instance, exposure to traumatic events might temporarily strengthen religious beliefs of some individuals, however, for other traumatic events might also result into more cynical and less religious behavior (Berger, 2015; Schwartzberg and Janoff-Bulman, 1991).

The theorist in the field of trauma believe that although beliefs system of individuals develops through the interactions in a society (Decker, 1993). However, traumatic events disrupt the information processing mechanism and alter the beliefs structure (Resick and Schnicke, 1993; Foa, 1989). When the traumatic events negate the beliefs system and overwhelm the information mechanism, the individuals use new information to develop a new beliefs pattern. For instance, they rely on (a) assimilation, i.e. develop stereotype beliefs, (b) accommodation, i.e. marginally change existing beliefs, and (c) over-accommodation, i.e. revise entire beliefs system and develop a new beliefs path.

In fact, the beliefs system is hypothesized as cognitive appraisal, which aim to individuals in the time of misfortunes (Park, 2005; Horowitz *et al.*, 1993). However,

[33] For instance, the prolonged hegemonic culture between the Protestants and Catholics resulted in significant transformation in religious beliefs, for detail discussion see also Wolffe (2011).

[34] For some individuals, shocks might temporarily weaken their religious beliefs, for others, the occurrence of the traumatic events may result in more cynical and less religious behavior. For detail, see also Schwartzberg and Janoff-Bulman (1991).

engulfed by adversities; religious beliefs might be challenged and restructured (Ben-Ezra *et al.,* 2010; Falsetti, *et al.,* 2003). However, adverse devastation might lead individuals to uphold and even strengthen their beliefs to admit adverse events as a part of "sacred order" (Berger, 2015; Taylor and Brown, 1988).[35] For instance, survivors of the Holocaust unveiled higher religious affiliation, and sensed that God has been testing their faith in a similar way as in the biblical story of Job. Similarly, following the traumatic event of 9/11 in the US, majority of citizens inclined to religious practices (Bonnano and Jost, 2006; Van Biema *et al.,* 2001; Schuster *et al.,* 2001). However, those individuals that highly exposed to the event turned more towards religion (Schuster *et al.,* 2001).

However, the effect of conflict on religious preferences has not systematically been investigated, i.e. legacy of conflict in terms of religious preferences remains the neglected part of conflict. Additionally, the existing literature on traumatic events and religious beliefs are limited to the partial dimension of the issue, i.e. they only investigates the change in basic rituals in post-traumatic events. Also, the results of these studies appear contradictory. For instance, some studies suggest traumatic events strengthen the religious beliefs, while others show that traumatic events weaken the religious beliefs. Driven from the discussion, we examine the effect of conflict on religious preferences of individuals by providing evidence from the conflict that happened in the District Swat of Khyber Pakhtunkhwa (KP) (formerly the North-West Frontier Province or NWFP), Pakistan. District Swat witnessed a deadliest conflict when a militants group started an armed struggle to implement the Sharia Laws in the region. For this purpose, they challenged the government writ and established a parallel government. However, to ensure the state writ and bring the valley to a normal life, the

[35] For detail, see also Baumeister (1991), Frankl (1963) and Falsetti *et al.* (2003).

government conducted a heavy military operation against the militants. The persistent conflict between the state forces and militants affected every aspect of life. In the present study we inquire that how exposure to violent conflict affect the individuals' religious preferences. For this purpose, we take various dimensions, such as (a) fundamental rituals and religious humanistic values, (b) inhabitants trust on religious organizations and figures, (d) their participatory preferences, and (e) cooperation behavior with various religious organizations.

2.1.1. Objectives of the study

This study is based on the following specific objectives:

1. To investigate how exposure to conflict affects fundamental rituals and religious humanistic values.
2. To examine how the occurrence of conflict affect level of trust on religious seminaries, religious figures, and welfare religious and non-welfare religious organizations.
3. To analyze how onset of conflict affects the level of participation in religious gatherings, welfare religious, and non-welfare religious organizations.
4. To inquire how exposure to conflict affects the level of cooperation with welfare religious, and non-welfare religious organizations.

2.1.2. Significance of the Study

Religion significantly determine the path of economic development. The practices of religious beliefs are manifestly found and observed across various societies and cultures. Almost eighty percent of the world's population own religious beliefs. Therefore, religion not only defines individuals' actions but also organize the society as whole. Additionally, religion in Pashtun society holds an important role. The social structure and ideological formation of Pashtun are preliminary dominated by Islam. Usually, their social and political lives are defined by the Sharia laws along with their

code of life, known as Pashtunwaliwali code of conduct. The strong bond between Islamic principles and Pakhtunwali make them devoted to religion. Nevertheless, for more than a decade, the Pashtun's society is facing intense conflict. The conflict in such society is driven by an organized Islamist militant group, therefore, it is perceived as religiously motivated. Similarly, the nature of conflict in the district Swat, which is promoted by an organized militants' groups for implementation of Islamic laws provides us favorable setting to examine its effects on religious preferences. The present study contributes to existing literature in two levels. First, this study for the first time in case of Pakistan provides evidence that how conflict affects religious preferences. Secondly, unlike the existing studies, the present study inquires the dynamics of religious preferences in post-conflict life in more comprehensive settings. For instance, besides fundamental rituals, this study examines inhabitants trust on religious organizations and figures, their participatory preferences, and cooperation behavior with various religious organizations.

2.1.3. Organization of the Study

This study is organized as follows. The section 2.1 is related to the introductory part. The section 2.2 explains the prior literature on the issue. The section 2.3 outlines variables description, descriptive statistics, and methodology. The last two sections, 2.4 and 2.5 provide discussion on results and conclusion, respectively.

2.2. Literature Review

Major events in life affect the individuals economically, physically, socially, and emotionally, and. A vast literature explores different aspects of traumatic events. Nevertheless, the impact of conflict shocks on religious preferences remain an unexplored part of trauma studies. In this section, we present some prior studies that analyze the response of individuals' religious beliefs to different traumatic events.

Considering the Holocaust survivors and their descendants, Carmil and Breznitz (1991) inquired various dimensions of the event. To identify the causal impact, the authors compared the survivors and their offspring to two control groups in terms of religious beliefs, political attitude, and future orientation. They observed that fifty years later of the event, the survivors and their children exhibited greater religious affiliation, i.e. greater belief in God and so hoped better future outcomes.[36] Similarly, the Lifton (2012) examined the religious behavior of the victims of the atomic bombing of Hiroshima. The author perceived three behavioral effects of the conflict: first, the sense of belonging, second, the sense of meaning and future orientation, third, the sense of higher religious affiliation. The survivors of the event acknowledged that being alive was a miracle, and that was all because of a powerful God. Additionally, the Scholte *et al.* (2004) unveiled the behavioral changes of prolonged Afghanistan's war. They surveyed a sample of 1011 individuals in highly affected provinces and found that traumatic inclined people more towards the religion. The 98% of the respondent showed higher religious affiliation and trust in God to overcome the distressing experience in life. Alike, Pargament *et al.* (1990) inquired three diverse samples of individuals, which faced various traumatic events, such as the survivors of Oklahoma bombing, the college students, and hospitalized patients. The authors observed that these individuals showed higher religious affiliation, which included seeking spiritual support, religious forgiveness, collaborative religious coping, religious purification, benevolent religious appraisal, and religious concentration.

Like above studies, Schuster *et al.* (2001) examined the behavioral response of individuals in the US after the 9/11 attack. Unlike the above studies, the authors

[36] The first generation is directly affected from the violent shocks, yet the trauma effect channelizes to upcoming generation through the socialization process. For detail, discussion see also Acock and Bengston (1978).

conducted their study soon after the event. They observed that after the attack, 90% of the individuals increased the practice of religious rituals, while 36% started donations to cope with the trauma. However, the individuals who admitted higher stress turned more towards religion than those who exposed less to the shock. Similarly, Van Biema *et al.* (2001) provided the comparable findings from the same attack. The author observed that after the attack, 60% of American started religious or memorial services, 27% increased the purchase of Bible, and 6% increased the weakly attendance of church and synagogue. Additionally, in post 9/11 survey, the Wagner (2001) offered the identical findings. The author witnessed that after attack, almost half of US inhabitants exhibited higher religious affiliation. Subsequently, Bonnano and Jost (2006) examined the highly exposed individuals to the 9/11 attack. They perceived a change toward conformist view following the attack, i.e. the shock was associated to a high level of religiosity and PTSD. Similarly, following the attack of 9/11, the Meisenhelder and Marcum (2004) inquired the religious and non-religious coping strategies to overcome the posttraumatic stress and perceived feelings of personal threats. The authors interviewed 814 clerics, and evaluated their stress and response to terrorist attack. They observed that 75% of clergy reported symptoms of PTSD, and 92% of them endorsed religious involvement as a religious cooing strategy. To overcome the shock, 74% reported praying more than usual and 65% reported seeking family and friends for spiritual support. Additionally, clerics reported positive religious coping among their congregants, as 86% of the clergy were approached for pastoral counseling.

Additionally, the Saab *et al.* (2003) inquired the post release life of Lebanese detainees of war in Lebanon. They examined the behavior of 118 sample of Lebanese hostages and observed higher distress among the victims as compared to the control

group. To relieve stress and find therapy the individuals inclined to a higher exercise of religious rituals and faith. Similarly, the Taylor *et al.* (2002) considered the hostages of Fiji crises and inquired the behavioral response of the released parliamentarian, staff, and the families of detainees. In a total 41 victim's sample, the authors observed that they (the victims) exhibited higher religious affiliation and beliefs to cope with the traumatic events as compared to the non-victims. In line with the earlier studies, Khouzam (2001) inquired the religious mediation effect on the PTSD among the Korean War Veterans. The author found that to mitigate the adverse shocks of war, the veterans turned more towards religious beliefs. Equally, Ned *et al.* (2008) conducted study on Croatian War Veterans. They observed PTSD elevated the level of religious activity among veterans. The authors concluded that raised religious activity symbolized a form of help-seeking behavior resulting from the higher distress levels.

Unlike above studies, other set of studies documented different results. For instance, the Ben-Ezra *et al.* (2010) considered the Jewish women's sample and analyzed their religious preferences in post-conflict life. They selected a sample of 111 women, of which 51 were treated and 60 were controlled. The authors found that traumatic events changed 48% of the victims' women religious perceptions. After the shock they adopted some more secular thoughts. The Comparable transformation in religious preferences has also been observed by the Falsetti, *et al.* (2003). The authors inquired the post traumatic behavior of 120 individuals from community and clinical samples. The authors found that individuals changed their religious beliefs following the traumatic event and become a less religious. Similarly, Astin *et al.* (1993) conducted a study on assaulted women. They found that intrinsic religiosity was negatively related to stress intensity. However, when the PTSD Checklist was incorporated in analysis, the results indicated that intrinsic religiosity was positively related to PTSD intensity

scores. Additionally, Kennedy (1989) conducted a study to examine the association between the traumatic events affects and religious beliefs. He observed that veterans who were diagnosed with PTSD scored lower than average level of religiosity, i.e. they turned less towards the religion to obtain, social support. Finally, the Lifton (2012) study found that although the experience of heinous Hiroshima attack increased religious affiliation in the long run, however, the in the short-run negatively affected the practice of religious rituals.

The above literature discussed different dimensions of religiosity in post conflict life. The studies like Carmil and Breznitz (1991), Lifton (2012), Scholte *et al.* (2004), Pargament *et al.* (1990), Schuster *et al.* (2001), Van Biema *et al.* (2001), Bonnano and Jost (2006), Saab *et al.* (2003), and other confirmed that individuals in post-conflict life exhibited higher religious affiliation and inclined people more towards the religion. Nevertheless, other studies like Ben-Ezra *et al.* (2010), Falsetti, *et al.* (2003), Astin *et al.* (1993), and Kennedy (1989) confirmed a less religious behaviour of the victims' individuals.

2.3. Variables Construction, Descriptive Statistics, and Methodology

2.3.1. Variables Description

We collect the data on religious preferences of individuals using the previous chapter sampling and data collection approach. The religious preferences include fundamental rituals, humanistic values, trust on religious organizations and figures, participation in religious activities and organizations, and cooperation with various religious organizations. Additionally, we use the same economic and demographic controls in the empirical analysis that we use in the earlier chapter.

2.3.1.1. Fundamental Ritual and Religious Humanistic Values

i. Fundamental Rituals

Fundamental rituals are measured how often an individual incline towards God in the times of adversity, follow Hadiths, offer prayer, pay due Zakah, performs Haj, and keeps fasting of Ramadan. We quantify the first two components on a scale of 1 to 4. Whereas, 1 implies the individuals no inclination and 4 suggests their higher level of practices. Further, we quantify the frequency of prayers on a scale of 1 to 5. 1 implies that an individual offer only one prayer and 5 suggests that offer all the five prayers. Similarly, we quantify the latter two components by a dummy variable 0 and 1. The value 1 implies that individuals pay Zakah and performed haj, and 0 otherwise. Finally, we categorize the numbers of fasting by a scale of 1 to 4. Whereas, 1 is assigned for fasting up to 10, 2 is assigned for fasting up to 20, 3 is assigned for fasting up to 25, and 4 is assigned for fasting up to 30. After quantification of the components, we construct an index of fundamental rituals, which are based on the average values of the said dimensions.

ii. Humanistic Values

Humanistic values are measured how often an individual extends financial and social support for family members, relatives, neighbors, and poor individuals. Besides, it includes the level of tolerance, involvement in community wellbeing services, and observes ethics. We quantify the sub-components of humanistic values by a scale of 1 to 4. The value 1 suggest no support, while 4 suggests their higher support for each of the category of the humanistic values. After quantification of the components, we construct an index of humanistic values, which are based on the average values of the said dimensions.

2.3.1.2. Trust

We take various forms of religious trust. These include the trust on religious seminaries, religious figures, welfare religious organizations, and non-welfare religious organizations. Additionally, each category of the religious trust has various sub-components. We quantify that sub-components of each category of trust by a scale of 1 to 4. Whereas, 1 implies individuals' preferences of no trust at all, and 4 suggests their highest level of trust. We construct each category of the trust as a mean value of its sub-components. The following discussion elucidates the sub-component of each category of trust.

i. **Trust on Religious Seminaries**

   Trust on religious seminaries is measured how often an individual's trust on private rudimentary schools of theology, private higher schools of theology, and public schools of theology.

ii. **Trust on Religious Figures**

   Trust on religious figures is measures how often an individual's trust on clerics, spiritual healers, and saints.

iii. **Trust on Welfare Religious Organizations**

   Trust on welfare religious organizations is measured how often an individual trust on religious organizations that promote social welfare of the inhabitants. These organizations include the Al-Khidmat foundation and Ummah welfare trust, which worked in the area.

iv. **Trust on Non-Welfare Religious Organizations**

   Trust on non-welfare religious organizations is measured how often an individual trust on religious organizations that promote religious values in a society. These organizations include Tableeghi jamat, Tanzeem-e-islami, and Dawati-e-islami.

2.3.2.3. Participation

Like trust, we also take different forms of religious participation. These include the participation in religious gatherings and participation in welfare religious and non-welfare religious organizations. Additionally, each category of religious participation has various sub-components. We quantify the sub-elements of each participation category by a scale of 1 to 4. The 1 implies no participation at all and 4 suggests their highest level of religious participation. Additionally, we construct each category of participation as a mean value of its sub-components.

i. **Participation in Religious Gatherings**

   Participation in religious gatherings is measured how often an individual participates in funeral prayers, collective prayers in times of adversities, and Quranic recitation gathering.

ii. **Participation in Welfare Religious Organizations**

   Participation in welfare religious organizations is measured whether an individual remain the member of welfare religious organizations and participate in their local and country level programs.

iii. **Participation in Non-Welfare Religious Organizations**

   Participation in non-welfare religious organizations is measured whether an individual remain the member of non-welfare religious organizations and participate in their local and country level programs.

2.3.2.4. Cooperation

Like above two dimensions, we also take different forms of religious cooperation. These include the cooperation with welfare religious organizations, and non-welfare religious organizations. Additionally, each category of religious cooperation has various sub-components. We quantify the sub-elements of each cooperation category by a scale of 1 to 4. The 1 implies no cooperation at all and 4 suggests their highest

level of religious cooperation. Additionally, we construct each category of cooperation as a mean value of its sub-components.

i. **Cooperation with Welfare Religious Organizations**

   Cooperation with welfare religious organizations is measured how often an individual propagates the role of welfare religious organizations and provides logistic and financial support to them. Besides, it includes the level of pressure, which these organizations face in an area during any development works.

ii. **Cooperation with Non-Welfare Religious Organizations**

   Cooperation with non-welfare religious organizations is measured how often an individual propagates the role of non-welfare religious organizations and provides logistic and financial support to them. Besides, it includes the level of pressure, which these organizations face in an area during their preaching.

2.4. Descriptive Statistics

In the following table 2.1, the descriptive statistics of the above variables of the two districts are given for the years 2010 and 2018, respectively. The descriptive statistics of the main variables for the year 2010 suggest that immediately after the termination of conflict, the average fundamental rituals practice, and religious humanistic values remained high among the conflict affected individuals (2.676, 3.001) as compared to non-affected individuals (2.067, 2.423), respectively. Similarly, the average trust on religious seminaries, religious figures, and non-welfare religious organizations remained lower among those exposed to conflict (2.157, 2.449, 2.307) than non-exposed individuals (2.973, 3.202,3.157), respectively; however, the affected individuals exhibited higher average trust on welfare religious organizations (3.140) than non-affected individuals (2.490). Additionally, the conflict affected individuals' revealed lower average participation in religious gathering and non-welfare religious organizations (2.324, 1.825) as compared to non-affected individuals (2.982, 2.302),

Table 2. 1: Descriptive Statistics

	Swat (2010)				Buner (2010)			
Variables	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Fundamental Rituals	2.676	0.265	2	3.166	2.067	0.291	1.166	2.833
Humanistic Values	3.001	0.433	1.714	4	2.423	0.388	1.286	3.571
Trust on Religious Seminaries	2.157	0.451	1	3.333	2.973	0.508	2	4
Trust on Religious Figures	2.449	0.507	1	4	3.202	0.548	1.667	4
Trust on Welfare Religious Organizations	3.140	0.545	1	4	2.490	0.536	1	4
Trust on Non-Welfare Religious Organizations	2.307	0.485	1	3.667	3.157	0.626	1.667	4
Participation in Religious Gatherings	2.324	0.459	1.25	3.5	2.982	0.522	2	4
Participation in Welfare Religious Organizations	2.675	0.288	2	3	2.019	0.329	1.000	3
Participation in Non-Welfare Religious Organizations	1.825	0.451	0.667	3	2.302	0.412	1	3
Cooperation with Welfare Religious Organizations	3.130	0.423	2	4	2.633	0.453	1.333	4
Cooperation with Non-Welfare Religious Organizations	2.519	0.596	1	4	3.205	0.517	1.667	4
	Swat (2018)				**Buner (2018)**			
Fundamental Rituals	2.510	0.291	1.666	3.166	2.04	0.285	1.166	2.833
Humanistic Values	2.819	0.397	1.714	4	2.340	0.377	1.143	3.571
Trust on Religious Seminaries	2.433	0.500	1	4	3.086	0.492	2	4
Trust on Religious Figures	2.662	0.506	1	4	3.297	0.507	2	4
Trust on Welfare Religious Organizations	2.828	0.529	1	4	2.340	0.536	1	4
Trust on Non-Welfare Religious Organizations	2.563	0.459	1	4	3.252	0.571	1.667	4
Participation in Religious Gatherings	2.519	0.467	1.25	3.75	3.071	0.519	2	4
Participation in Welfare Religious Organizations	2.41	0.385	1.333	3	1.908	0.367	1	3
Participation in Non-Welfare Religious Organizations	1.984	0.403	0.667	3	2.365	0.394	1.333	3
Cooperation with Welfare Religious Organizations	2.853	0.512	1	4	2.501	0.467	1.333	4
Cooperation with Non-Welfare Religious Organizations	2.719	0.563	1.333	4	3.277	0.491	2	4

Note: Author Own Calculations. The Total Number of Observation are 400 for each District.

respectively; yet they showed higher average participation in welfare religious organizations (2.675) than non-affected individuals (2.019). Finally, the average cooperation with welfare religious organizations remained high among the conflict-affected individuals (3.130) than non-affected (2.663), yet they showed lower cooperation with the non-welfare religious organizations (2.519) than non-affected (3.205).

Furthermore, the descriptive statistics of variables for the year 2018 suggest that almost nine years later of conflict, the average fundamental rituals practice, and religious humanistic values remained high among the conflict affected individuals (2.510, 2.819) as compared to non-affected individuals (2.04, 2.340), respectively. Similarly, the average trust on religious seminaries, religious figures, and non-welfare religious organizations remained lower among those exposed to conflict (2.433, 2.662, 2.563) than non-exposed individuals (3.086, 3.297, 3.252), respectively; however, the affected individuals exhibited higher average trust on welfare religious organizations (2.828) than non-affected individuals (2.340). Additionally, the conflict affected individuals' revealed lower average participation in religious gathering and non-welfare religious organizations (2.519,1.984) as compared to non-affected individuals (3.071,2.365), respectively; yet they showed higher average participation in welfare religious organizations (2.41) than non-affected individuals (1.908). Finally, the average cooperation with welfare religious organizations remained high among the conflict affected individuals (2.853) than non-affected (2.501), yet they showed lower cooperation with the non-welfare religious organizations (2.719) than non-affected (3.277).

2.5. Methodology

Like the previous chapter, we first apply the OLS and then SRDD technique to examine the effect of conflict on religious preferences. We estimate the following model through the OLS.

$$Y_i = \beta_o + \beta_1 D_i + \theta^\tau \sum Z_i + U_i \qquad (1)$$

In above models, Y is the set of religious preferences, which includes different forms of religious trust, participation, and cooperation. D_i is the dummy variable, which takes the value of 1 for the households which lie in conflict zone, and 0 for the control group. The β_1 captures the intensity of change in religious preferences as a results of conflict. Z_i is the set of control variables of households, which includes the economic controls, demographic controls, and location of households. Whereas, U_i is the error term. We estimate model 1 for each of the underlined objectives for the year 2010, and 2018 to assess the persistency in religious preferences, when a social structure expose to a conflict shock. Additionally, we exploit the official division of the conflict zone to capture the heterogeneous impact of conflict shock. In order to do so, we estimate the following models for the treated and control groups through SRDD, respectively.

$$Y_t = \alpha_t + \beta_t (X - b) + \varepsilon_t \qquad (2)$$

$$Y_c = \alpha_c + \beta_c (X - b) + \varepsilon_c \qquad (3)$$

In the above models, Y is the set of religious preferences in the two districts. By estimating the given models, the impact of conflict on religious preferences can be computed through the difference between the intercepts α_t and α_c of the models. However, to avoid the complications, the present study uses the pooled version of the model (1) and (2), presented by Lee and Lemieux (2010). Let $\tau = \alpha_t - \alpha_c$ and the dummy variable D, which equal 1 for the treated district and 0 for control district. The pooled model is of the following form.

$$Y = \alpha_0 + \tau D + (\beta_t - \beta_c)(X - b) + (\beta_t - \beta_c) D (X - b) + \theta^{\tau} \sum Z_i + \varepsilon \quad (4)$$

Our parameter of interest is τ, which shows the average treatment effect on the treated district, and can be interpreted as the jump between the two regression lines on the border. Y is the set of religious preferences, and Z_i is the set of control variables in our regression as discussed earlier.

2.5. Results and Discussion

This section provides empirical findings of the study. The first section, 2.5.1 sums the impact of conflict on fundamental rituals and religious humanistic values. The section 2.5.2 depicts the impact of conflict on various forms of religious trust. The section 2.5.3 considers the impact of conflict shock on participatory preferences of individuals in various religious activities and organizations. The last section, 2.5.4 examines the consequences of conflict shock on cooperation with various welfare religious and non-welfare organizations.

2.5.1. Fundamental Rituals and Religious Humanistic Values

2.5.1.1. Fundamental Rituals

The following table 2.6 and 2.7 report the OLS and SRDD estimates of conflict shock on the level of fundamental rituals, respectively. Additionally, panel A and panel B in the tables predict the level of fundamental rituals in year 2010 and 2018, respectively. The coefficients associated to conflict in all specifications of both the tables appear positive and significant, which suggest that conflict shock promote the level of individuals' involvement in fundamental rituals. Nevertheless, such effect not only prevails immediately after the shock, rather the shock hit the social structure such deeply that its effect remains persistent over the time. In panel A, the coefficient associated to conflict predicts that immediately after conflict, the average involvement of the conflict affected individuals in fundamental rituals increased on average by 0.605 percent points. Whereas, the region dummy appears insignificant, which suggests that

there happened no difference in the behavior of urban and rural regions individuals with regards to the practice of fundamental rituals. Alternatively, the involvement in fundamental rituals equally raised across the urban and rural regions. Similarly, the estimate in panel B suggests even nine years later of conflict the involvement of conflict affected individuals in fundamental rituals remained high on average by 0.466 percent points. Where like the earlier findings, the effect remained the same for the urban and rural individuals, as depicted by the region dummy.

The above findings are supported by the prior studies such as Schuster *et al.* (2001) and Van Biema (2001), which also reported that exposure to conflict promote the level of involvement in fundamental ritual. Our findings are also compatible with the Cultural Evolutionary Theory. The Cultural Evolutionary Theory explains two channels which stimulates the conflict affected individuals to adhere more to religion. Firstly, the likelihood of external threats induces individuals to follow their social custom, including their divine beliefs to minimize the adverse shock. Secondly, they increase the religious rituals practice to understand and exploit the psychological states imposed by the uncertainty and existential threats. Additionally, other evidence suggests that people might be attracted to rituals or ritualized practices as a mean to deal with the anxiety or stress. Therefore, the involvement in religious rituals might support them to lessen the adverse impacts of traumatic experiences on well-being (Henrich *et al.*, 2019).[37]

Since, OLS estimates provide a combine treatment effect, and ignore the heterogeneous impacts of shock. However, different people in the conflict zone exposes differently to a conflict shock, therefore, they might have different level of involvement

[37] During stressful life events, methods of religious coping are the most common forms of coping strategies. For detail, see also Pargament *et al.* (1990).

Table 2. 2: Fundamental Rituals (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.608***	0.607***	0.605***	0.471***	0.469***	0.466***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Region Dummy	0.016	0.016	0.017	-0.003	-0.003	-0.003
	(0.020)	(0.020)	(0.020)	(0.020)	(0.021)	(0.021)
Constant	2.062***	1.414***	1.382***	2.041***	1.439***	1.212***
	(0.016)	(0.188)	(0.212)	(0.017)	(0.286)	(0.300)
Observations	800	800	800	800	800	800
R-squared	0.544	0.552	0.552	0.400	0.403	0.410
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 3: Fundamental Rituals (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.164***	0.193***	0.130***	0.121***	0.144***	0.108***
	(0.008)	(0.010)	(0.008)	(0.009)	(0.011)	(0.008)
Border Distance	0.004**	0.010**	-0.002*	0.003*	0.009**	-0.001
	(0.002)	(0.004)	(0.001)	(0.002)	(0.004)	(0.001)
Constant	1.394***	0.184	1.578***	0.984**	0.699	1.261***
	(0.286)	(0.484)	(0.335)	(0.447)	(0.746)	(0.468)
Observations	348	165	287	348	165	287
R-squared	0.567	0.711	0.530	0.363	0.564	0.461
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

in fundamental rituals. To capture the heterogeneous impact of shock, we rely on SRRD estimates. The panel A estimates suggest that immediately after conflict, the highly exposed individuals exhibited comparatively high average involvement in fundamental rituals (0.193) as compared to moderately (0.164), and least affected (0.130) regions' individuals. Interestingly, the same trend prevailed over the time. The estimates in panel B suggest that after nine years of conflict the average involvement of highly exposed individuals in fundamental rituals remained high (0.144) as compared to the moderate (0.121) and least affected (0.108) individuals.

The above findings of the study are reasonable in terms of magnitude and direction as far the social structure of the inhabitants of district Swat is concerned. Historically, their choices are dominated by the religion and Pakhtunwali code of conduct. Therefore, any shock in life attract them more towards religion and social values to minimize the cost associated with shock. The conflict shock in the district, which these people faced for years, affected their social and economic structure. Hence, the ideal strategy to mitigate the shock and lower the post-traumatic stress, the individuals turns more towards religious rituals. Additionally, the non-linear affect also seems promising. As, the individuals that lived in intense part of the conflict zone preferred higher involvement in fundamental rituals followed by moderately, and the least affected regions' individuals. These spatial findings imply that since highly affected individuals remained more susceptible to conflict shocks, therefore inclined more towards the fundamental rituals to avoid cost of shock as compared to moderately and least affected individuals.

2.5.1.2. Humanistic Values

The following tables 2.8 and 2.9 report the OLS and SRDD estimates of conflict shock on humanistic values, respectively. Whereas, the panel A and B report the 2010 and

Table 2. 4: Humanistic Values (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.578***	0.576***	0.578***	0.478***	0.479***	0.481***
	(0.029)	(0.029)	(0.030)	(0.027)	(0.027)	(0.028)
Region Dummy	-0.001	-0.003	-0.004	0.011	0.010	0.006
	(0.029)	(0.029)	(0.030)	(0.027)	(0.028)	(0.028)
Constant	2.424***	2.301***	2.259***	2.336***	2.982***	3.029***
	(0.023)	(0.272)	(0.302)	(0.022)	(0.399)	(0.410)
Observations	800	800	800	800	800	800
R-squared	0.331	0.333	0.338	0.277	0.280	0.282
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 5: Humanistic Values (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.163***	0.218***	0.120***	0.136***	0.181***	0.099***
	(0.012)	(0.020)	(0.010)	(0.012)	(0.017)	(0.010)
Border Distance	0.005**	0.036***	-0.002	0.006***	0.031***	-0.003*
	(0.002)	(0.007)	(0.002)	(0.002)	(0.006)	(0.002)
Constant	2.399***	-0.039	2.178***	2.350***	1.724*	3.423***
	(0.430)	(0.743)	(0.466)	(0.610)	(0.989)	(0.598)
Observations	348	165	287	348	165	287
R-squared	0.387	0.555	0.363	0.310	0.498	0.317
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

2018 preferences, respectively. Similar to fundamental rituals, the conflict promotes the humanism values among the conflict-affected individuals. The OLS estimate in panel A predicts that immediately after conflict, humanistic support among the war-exposed individuals increased on average by 0.578 percent points as compared to non-exposed individuals. Whereas, the effect homogenously prevailed across the urban and rural individuals, as shown by the region dummy. Similarly, the estimate in panel B suggests even nine years later of conflict, the humanistic support among victims' individuals remained high on average by 0.481percent points as compared to non-exposed individuals. Whereas, the region dummy appears insignificant which suggests that the effect remained similar across the urban and rural regions over the time.

The above findings are supported by the prior studies such as McNamara (2016) and Purzycki (2016) which suggest that conflict strengthens the beliefs on basics rituals. Usually, the pro-sociality among the conflict affected individuals or the individuals that expose to temporal threats, suffering and uncertainty is stimulated by commitments to God, divine protection, and certain beliefs after death. Also, such beliefs encourage the formation of supportive groups at individuals and societal level, which aim to stronger the social connections and mutual support (Henrich *et al.,* 2019). Thus the exposure to conflict promotes has a robust effect on measures of social support and humanistic values in a society. Additionally, the conflict shock results in destruction of household assets and make the investment in human and physical capital risky, expensive and constrained. Consequently, the sufferers become more reliant on the existing informal setup of risk sharing through investment in social capital. Where such investment is observed in groups' connection and community and individuals support (Bauer *et al.,* 2016).

Additionally, to capture the heterogeneous effects of shock, we rely on SRDD estimates. The panel A estimates suggest that immediately after shock, the average humanism values among the highly exposed individuals remained high (0.183) as compared to moderately (0.157), and least affected (0.124) regions' individuals. Interestingly, the same pattern continued over time. The panel B estimates suggest the even nine later of conflict, the highly exposed individuals exhibited higher average humanistic support (0.165) than the moderately (0.133) and least affected (0.091) regions' inhabitants.

The above findings are promising as for the social structure of the inhabitants of district Swat is concerned. As mentioned earlier their social choices are driven by the Pakhtunwali code of conduct and religious values. Usually, these factors motivate them to be more altruistic towards the other individuals in the times of misfortunes. Thus, to normalize the life in post-conflict setting, the inhabitants extends their social and financial support towards each other and developed a strong bond in terms of community supports groups. These findings are more prominent in case of spatial analysis. For instance, individuals that lived in intense part of the conflict zone preferred higher humanism support as compared to moderately, and the least affected regions' individuals. This happens because the highly effected suffer more in the conflict, which motivates them to be more generous to others in an area to reduce the effect of conflict shock. Whereas, such behavior is followed by the moderately and least conflict affected individuals.

2.5.2. Trust

2.5.2.1. Trust on Religious Seminaries

The following tables 2.10 and 2.11 depict the OLS and SRDD estimates of conflict shock on the level of trust on religious seminaries, respectively. Whereas, the panel A and B depicts the 2010 and 2018 trust level, respectively. Unlike the earlier findings,

Table 2. 6: Trust on Religious Seminaries (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.818***	-0.819***	-0.821***	-0.652***	-0.653***	-0.651***
	(0.034)	(0.034)	(0.034)	(0.035)	(0.035)	(0.035)
Region Dummy	0.045	0.043	0.048	-0.001	0.000	0.006
	(0.035)	(0.035)	(0.035)	(0.036)	(0.036)	(0.035)
Constant	2.954***	2.828***	2.772***	3.086***	3.093***	3.262***
	(0.028)	(0.319)	(0.329)	(0.029)	(0.511)	(0.539)
Observations	800	800	800	800	800	800
R-squared	0.421	0.422	0.427	0.303	0.303	0.311
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 7: Trust on Religious Seminaries (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.215***	-0.280***	-0.173***	-0.169***	-0.211***	-0.147***
	(0.015)	(0.017)	(0.013)	(0.015)	(0.017)	(0.013)
Border Distance	-0.009***	-0.025***	0.005**	-0.017***	-0.025***	0.004*
	(0.003)	(0.007)	(0.002)	(0.003)	(0.006)	(0.002)
Constant	3.634***	3.263***	2.711***	3.423***	5.727***	3.391***
	(0.482)	(0.805)	(0.567)	(0.750)	(1.086)	(0.876)
Observations	348	165	287	348	165	287
R-squared	0.426	0.647	0.426	0.346	0.536	0.347
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

the coefficients associated to conflict in all the specifications of both the tables suggest that conflict significantly reduced trust on theology institutions among the conflict-affected individuals. The OLS estimate in panel A depicts that immediately after conflict the trust on religious seminaries reduced on average by 0.821 percent points among the conflict-affected individuals as compared to the non-affected individuals. Whereas, the region dummy appears insignificant, which suggests that the drop in trust on religious seminaries homogenously occurred across urban and rural individuals. Additionally, panel B estimate suggests that after nine years later of conflict, the affected individuals trust on religious seminaries remained lower on average by 0.651 percent points as compared to the control individuals. Additionally, over the time, the urban and rural individuals exhibited the same trust pattern as depicted by the region dummy.

The above findings are supported the earlier studies such as Singer (2001) and Haqqani (2002). These studies argue that the fall in trust on religious seminaries is attributed to the unregulated and unbounded structure of religious seminaries, which stimulate them to promote the immoderate and extremist thoughts in a society. Additionally, the masses associated to these institutions are often witnessed the followers of extremist groups. Whereas, such association is observed to promote and facilitate the violent activities of the non-state actors or militants in the country (Rahman, 2007; Nayyar, 1998).[38]

Unlike the OLS estimates, the SRDD estimates confirm the heterogeneous impact of conflict shock. The estimates in panel A depict that immediately after conflict, the average trust of individuals on seminaries in the highly exposed region

[38] Various reports of International Crises Group (ICG) takes the nexus between militancy and religious organizations as a given.

remained comparatively lower (-0.280) than individuals in the moderately (-0.215) and least affected (-0.173) regions. The same trust prevailed over time. The panel B estimates suggest that even nine years later of conflict, the highly exposed exhibited lower average trust on seminaries (-0.211) than individuals in the moderately (-0.169) and least affected (-0.147) regions.

The above findings are reasonable in case of district Swat. The individuals in the district witnessed the uncontrolled violence, which severely affected their social and economic lives. However, the conflict started in the district when the leader of militants, Maulana Fazalullah established a seminary to preach the religious values in the district. Later, the militants used the seminary as headquarter to challenge state writ, develop a parallel judicial system, and conduct violent activities. Additionally, they also established links with other seminaries in the district to impose their ideology. Therefore, the conflict shock reduced the trust of the inhabitants on seminaries. Whereas, such conflict shock such deeply hit the social structure that its effect remained persistent over time. Additionally, the reduction in trust remain more visible in case of highly affected area than moderately and least affected region. It happens because the main preaching point of the militants happened in the highly affected area, where the individuals witnessed more violent activities of the individuals than other regions. Consequently, they reveal high negative trust on religious in order to avoid the cost of conflict in future than moderately and least affected individuals.

2.5.2.2. Trust on Religious Figures

The following tables 2.12 and 2.13 depict the OLS and SRDD estimates of conflict shock on the level of trust on religious figures, respectively. Whereas, the panel A and B depicts the 2010 and 2018 trust level, respectively. Like the fall on trust on seminaries, the trust on religious figures also decreased among the conflict-affected

Table 2. 8: Trust on Religious Figures (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.753***	-0.754***	-0.756***	-0.635***	-0.638***	-0.638***
	(0.037)	(0.037)	(0.038)	(0.036)	(0.036)	(0.036)
Region Dummy	0.002	0.001	0.007	-0.001	0.003	0.007
	(0.038)	(0.038)	(0.038)	(0.036)	(0.036)	(0.037)
Constant	3.201***	1.850***	1.766***	3.297***	2.708***	2.828***
	(0.030)	(0.345)	(0.372)	(0.029)	(0.515)	(0.538)
Observations	800	800	800	800	800	800
R-squared	0.337	0.351	0.357	0.283	0.284	0.288
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 9: Trust on Religious Figures (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.200***	-0.248***	-0.157***	-0.174***	-0.212***	-0.131***
	(0.017)	(0.018)	(0.012)	(0.016)	(0.017)	(0.012)
Border Distance	-0.012***	-0.023***	0.002	-0.013***	-0.018**	-0.002
	(0.003)	(0.008)	(0.002)	(0.003)	(0.007)	(0.002)
Constant	2.533***	3.172***	1.420***	2.454***	6.502***	2.946***
	(0.565)	(0.828)	(0.534)	(0.782)	(1.277)	(0.827)
Observations	348	165	287	348	165	287
R-squared	0.343	0.548	0.413	0.302	0.522	0.298
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

individuals. The OLS estimate in panel A depicts that immediately after conflict the trust on religious figures decreased on average by 0.756 percent points among the conflict-affected individuals as compared to the non-affected individuals. Whereas, the region dummy appears insignificant, which suggests that the drop in trust on religious figures homogenously occurred across the urban and rural individuals. Additionally, panel B estimate suggests that after nine years later of conflict, the affected individuals trust on religious figures remained lower on average by 0.638 percent points as compared to the control individuals. Additionally, over the time, the urban and rural individuals exhibited the same trust pattern as depicted by the region dummy.

In the post-conflict life, the fall in trust on religious figures happens due to several reasons. Firstly, it is perceived that the homogeneity of preferences among the religious entities or struggle for same cause stimulates the religious figures to formulate strategies that explicitly or implicitly support the actions of militants' groups. For instance, they exploit the individuals' grievances caused by complex formal institutions to justify the violent struggle for implementation of Sharia rules and create a factor of sympathy for armed groups. Secondly, they manipulate interpretation of Sharia laws to support the violent actions. As usually, their pursuits are apolitical, therefore, they preach social values in line with their own version of Islam. Thus, they not only promote violence, but also refrain political development (Faith, 2018; Sharifi, 2016). Therefore, these actions create negative perception about them and leads to a lower trust on religious figures.

The SRDD estimates confirm the heterogeneous impact of conflict. The SRDD estimates in panel A depict that immediately after conflict, the individuals in highly exposed region exhibited lower average trust on religious figures (-0.248) than moderately (-0.200), and least affected (-0.157) regions' individuals. Interestingly, the

same trends continued over the time. The panel B estimates show that even nine years later of conflict, the highly exposed individuals' preferred to reveal comparatively lower trust on religious figures (-0.212) as compared to the moderately (-0.174) least affected (-0.121) individuals in the regions.

The findings related to trust on religious figures are more convincing in case of Swat. Although, the lives of inhabitants of Swat are thoroughly structured by the religion. However, the intense conflict in the district observed religiously motivated, as it was initiated and controlled by religious figures, headed by Maulana Fazalullah. A majority of the religious entities (except some) interpreted the Sharia laws in ways that provided support to the militant's groups in terms of recruitment and financial matter. These arrangements of the religious figures provided not only a stability but also reason to fight against the state forces. Hence, the role of religious figures triggered the intensity of conflict. Therefore, the inhabitants exhibited lower trust on them. These findings are more prominent in case of highly affected region. Since, the inhabitants in more exposed region experienced more supportive behavior of the religious figures towards the militants; they therefore revealed lower trust on them as compared to individuals in the moderately and least affected areas.

2.5.2.3. Trust on Welfare Religious Organizations

The following tables 2.14 and 2.15 depict the OLS and SRDD estimates of conflict shock on the level of trust on welfare religious organizations, respectively. Whereas, the panel A and B depicts the 2010 and 2018 trust level on such organizations, respectively. Unlike the above findings, the level of trust on welfare religious organizations increased in post-conflict life. The OLS estimate in panel A suggests that immediately after conflict, the level of trust of the conflict-affected individuals on welfare religious organizations increased on average by 0.648 percent points as

Table 2. 10: Trust on Welfare Religious Organizations (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.651***	0.650***	0.648***	0.486***	0.486***	0.486***
	(0.038)	(0.038)	(0.039)	(0.038)	(0.038)	(0.038)
Region Dummy	-0.023	-0.025	-0.019	0.020	0.021	0.023
	(0.039)	(0.038)	(0.039)	(0.038)	(0.038)	(0.038)
Constant	2.499***	2.276***	2.133***	2.332***	2.738***	2.637***
	(0.031)	(0.347)	(0.397)	(0.030)	(0.524)	(0.550)
Observations	800	800	800	800	800	800
R-squared	0.266	0.268	0.276	0.174	0.175	0.177
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 11: Trust on Welfare Religious Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.191***	0.228***	0.141***	0.142***	0.191***	0.099***
	(0.016)	(0.022)	(0.015)	(0.017)	(0.019)	(0.014)
Border Distance	0.011***	0.027***	-0.004*	0.012***	0.024***	0.003
	(0.003)	(0.009)	(0.003)	(0.003)	(0.007)	(0.003)
Constant	2.030***	0.817	1.977***	1.275	3.142***	2.614***
	(0.559)	(0.862)	(0.693)	(0.814)	(1.188)	(0.848)
Observations	348	165	287	348	165	287
R-squared	0.360	0.491	0.269	0.221	0.447	0.165
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

compared to the non-affected individuals. Whereas, the region dummy appears insignificant which suggests that there happened no difference in the level of trust of the urban and rural regions' individuals. Alternatively, the rise in trust on welfare religious organizations equally happened across the urban and rural regions. Additionally, over the time, there happened some reduction in the magnitude of the level of trust on welfare religious organizations. However, the estimates in panel B predicts that after nine years of conflict the average trust of affected individuals on welfare religious remained high by 0.486 percent points as compared to non-victims. Similarly, like the earlier findings, the level of trust homogenously prevailed across the urban and rural regions, as shown by the region dummy.

The rise in trust on welfare religious organizations are supported by various arguments. Among other NGOs, different welfare religious organizations initiate various welfare programs in a conflict affected region to compensate the loss of inhabitants. A common view of the political theory believes that religious parties initiate social welfare programs in conflict zone as a form of patronage politics to attain political support of the individuals. In order to achieve the loyalty of citizens, the religious welfare organizations compete and act like the supplier of the public good (Rosenblum, 2003). As a result, they offer free services and other necessity goods to the shock affected individuals (Bano, 2009). Hence, their active contribution in rehabilitation process elevate the level of trust of conflict affected individuals on such organizations.

To capture the heterogeneous impact of conflict, we rely on SRDD estimates. The coefficient associated to conflict in Panel A and B depict that individuals in highly exposed region exhibited comparatively high average trust on religious welfare

organizations (0.228, 0.191) than individuals in the moderately (0.191, 0.142) and least affected (0.141, 0.099) regions.

The aforementioned findings are compatible to the case of district Swat. In post-conflict setting, various welfare religious organizations, such as Al-Khidmat foundation and Ummah welfare trust initiated various welfare religious programs. In the district, they installed medical camps and distributed necessities to the individuals. Additionally, they targeted those areas of the district, which remained highly affected during the conflict. The political affiliation and development works of these organizations motivated the inhabitant to show higher trust on them. Whereas, the highly affected individuals exhibited higher trust on such organizations because they mainly focused the highly affected part of the district as compared to moderately and least affect region.

2.5.2.4. Trust on Non-Welfare Religious Organizations

The following tables 2.16 and 2.17 depict the OLS and SRDD estimates of conflict shock on the level of trust on non-welfare religious organizations, respectively. Whereas, the panel A and B depicts the 2010 and 2018 trust level on such organizations, respectively. Unlike trust on welfare religious organizations, trust of the conflict affected individuals on non-welfare religious organizations decreased. The OLS estimate in panel A depicts that immediately after conflict, the trust of the conflict-affected individuals on non-welfare religious organizations decreased on average by 0.863 percent points as compared to the non-victims. Whereas, the same effect prevailed equally across the urban and rural regions, as depicted by the region dummy. Additionally, the negative trust on welfare religious organizations prevailed over time. The estimate in panel B suggests that even nine years later of conflict, the inhabitants

Table 2. 12: Trust on Non-Welfare Religious Organizations (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.852***	-0.854***	-0.863***	-0.691***	-0.691***	-0.693***
	(0.040)	(0.039)	(0.039)	(0.037)	(0.037)	(0.037)
Region Dummy	0.043	0.042	0.055	0.030	0.030	0.035
	(0.040)	(0.040)	(0.040)	(0.037)	(0.037)	(0.037)
Constant	3.140***	1.810***	1.635***	3.240***	2.990***	2.928***
	(0.034)	(0.363)	(0.384)	(0.032)	(0.523)	(0.551)
Observations	800	800	800	800	800	800
R-squared	0.367	0.378	0.390	0.308	0.308	0.311
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 13: Trust on Non-Welfare Religious Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.214***	-0.316***	-0.173***	-0.169***	-0.254***	-0.136***
	(0.018)	(0.019)	(0.014)	(0.017)	(0.018)	(0.013)
Border Distance	-0.006*	-0.032***	0.004	-0.003	-0.031***	0.000
	(0.003)	(0.008)	(0.003)	(0.003)	(0.007)	(0.002)
Constant	2.264***	2.704***	1.699***	2.515***	7.304***	2.824***
	(0.567)	(0.898)	(0.624)	(0.819)	(1.207)	(0.904)
Observations	348	165	287	348	165	287
R-squared	0.350	0.651	0.376	0.245	0.594	0.289
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

trust on non-welfare religious organizations remained lower on average by 0.693 percent points than the non-affected individuals.

In post-conflict life, the negative trust on non-welfare religious organizations happens because of the inhabitants' perception that such organizations in conflict zone support the ideology of militants (Azam, 2010; Howenstein, 2006). In conflict zone, the militants associate their struggle to religious reformation. Consequently, the religious groups support their objectives by assigning divine significance to their violent actions and motivate the individuals to sacrifice for the holy purpose (Juergensmeyer, 2017). Thus, such suspicious and unfair behavior of non-welfare religious organizations results in negative trust of the inhabitants.

We, rely on the estimates of the SRDD for heterogeneous effects. The estimates in panel A depict that immediately after the conflict the individuals in highly exposed region exhibited comparatively lower average trust on non-welfare religious organizations (-0.316) as compared to moderately (-0.214), and least affected (-0.171) individuals. Interestingly, the same trends continued over time. After nine years later of conflict, the highly exposed individuals exhibited lower average trust on such religious organizations (-0.254) than the moderate (-0.169) least affected (-0.136) individuals in the regions.

The aforementioned findings are relevant to our study area. There are various religious organizations such as Tableeghi jamat, Tanzeem-e-islami, and Dawati-e-islami that preach religious values in the district. Although, these organizations not directly remained involve in the conflict, however, their religious struggle implicitly promoted the views of militants groups in the region. Additionally, even if these organizations did not show affiliation to militants group, they never explicitly opposed

their violent actions. Consequently, the suspicious behavior of these organization resulted in lower trust of inhabitants in the district Swat on such organizations.

2.5.3. Participation

2.5.3.1. Participation in Religious Gatherings

The following tables 2.19 and 2.20 depict the OLS and SRDD estimates of conflict on the participatory behavior of conflict affected individuals in religious gathering, respectively. Whereas, the panel A and B depict the 2010 and 2018 participation level of inhabitants in religious gathering, respectively. The OLS estimate in panel A predicts that immediately after shock, the individuals' participation in religious gatherings decreased on average by 0.663 percent points as compared to the non-affected individuals. Whereas, the region dummy appears insignificant which shows that there been no difference in the level of religious gathering of urban and rural individuals. Additionally, the same trend continued over time. The panel B estimate suggest that after nine years of conflict, the average participation in religious gatherings of the conflict affected inhabitants remained lower on average by 0.554 percent points than non-affected individuals. Where like the earlier findings, there observed no difference across the urban and rural regions, as suggested by the region dummy.

The effect of conflict shock on the level of religiosity is multidimensional and complex. Although, it can strengthen the religious beliefs, however, it adversely causes the pattern of religious dogmas (Falsetti *et al.,* 2003). The negative beliefs in the post-conflict life leads to vague and gloomy view of world and less religious struggle. Whereas, such beliefs stimulate the spiritual discontent, religious restlessness, and revisit of religious practices (Pargament *et al.,* 1990). There are various studies such as Ben-Ezra *et al.* (2010) and Schwartzberg and Janoff-Bulman (1991) which also documented the negative impact of conflict on religious gathering.

Table 2. 14: Participation in Religious Gathering (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.659***	-0.660***	-0.663***	-0.552***	-0.553***	-0.554***
	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)
Region Dummy	0.026	0.024	0.031	0.011	0.013	0.018
	(0.035)	(0.035)	(0.036)	(0.036)	(0.036)	(0.036)
Constant	2.971***	2.755***	2.630***	3.066***	3.163***	3.131***
	(0.029)	(0.324)	(0.333)	(0.029)	(0.501)	(0.528)
Observations	800	800	800	800	800	800
R-squared	0.310	0.312	0.323	0.238	0.239	0.244
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 15: Participation in Religious Gathering (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.165***	-0.241***	-0.147***	-0.144***	-0.190***	-0.112***
	(0.015)	(0.017)	(0.013)	(0.015)	(0.017)	(0.013)
Border Distance	-0.014***	-0.027***	0.006**	-0.017***	-0.026***	0.006**
	(0.003)	(0.007)	(0.002)	(0.003)	(0.006)	(0.002)
Constant	3.479***	2.734***	2.940***	2.980***	5.673***	3.573***
	(0.490)	(0.765)	(0.562)	(0.761)	(1.189)	(0.790)
Observations	348	165	287	348	165	287
R-squared	0.332	0.598	0.351	0.289	0.492	0.254
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Unlike the OLS estimates, the SRDD estimates confirm the heterogeneous impact of conflict shock. The SRDD estimates in panel A depict that immediately after conflict, the individuals in highly affected region's exhibited lower average participation in religious gathering (-0.241) than moderately (-0.165), and least affected (-0.147) regions' individuals. Additionally, over time the same trend prevailed. The panel B estimates confirm that after nine years, the highly affected individuals exhibited lower average participate in religious gathering (-0.190) than the moderately (-0.144) and least affected (-0.112) individuals.

The aforementioned findings are relevant to the district Swat in terms of direction in magnitude. Although, the choices of the inhabitants in the valley are driven and shaped by the religion, however, the intense conflict also changed their certain beliefs. Among other changes, they decreased their level of participation in religious ceremonies. This happened due to the fact that conflict in the valley was promoted and intensified by a systematic gathering of religious groups. In particular, the Maulana Fazalullah attained the support of masses through gathering them for a religious cause. The Fazalullah used gathering of people for recruitment in his militant's wing. Additionally, militants targeted those religious gatherings that refused to follow their instructions. Whereas, those inhabitants which attended such gathering also faced coercion from the state forces. Hence, to avoid any unfavorable situation in the future the inhabitants avoid participation in religious gatherings. Interestingly, such effect appears more prominent for the individuals in highly affected areas as compared to moderately and least affected. This happens because they (highly exposed individuals) witnessed high social and economic cost of religious gatherings.

2.5.3.2. Participation in Welfare Religious Organizations

The following tables 2.20 and 2.21 exhibit the OLS and SRDD estimates of conflict shock on level of participation in welfare religious organizations. Whereas, the panel A and B depict the 2010 and 2018 participation level of inhabitants in welfare religious organizations, respectively. The coefficient associated to conflict in all the specifications of the tables suggest that post-conflict life is associated with increased participation in welfare religious organizations. The OLS estimate in panel A predicts that exposure to conflict stimulated the level of participation of the individuals in welfare religious organizations on average by 0.657 percent points as compared to the non-affected. Whereas, the region dummy appears insignificant, which suggests that there observed no difference in the participation behavior of urban and rural regions' individuals. Similarly, in panel B the coefficient associated to violent conflict depicts that after nine years of conflict the participation of conflict affected individuals in welfare religious organizations remained high on average by 0.505 percent points. Where, like the earlier finding the effect homogenously prevailed across the urban and rural regions, as suggested by the region dummy.

The rise in participation in welfare religious organizations happens because these organizations provides different form of community services in a conflict affected regions that attain the masses interest. Usually these organizations provide direct services, donate in-kind assistance, and provide funds to the victims (Salamon and Teitelbaum, 1985). Additionally, these organizations also serve as a supplier of public goods, which the conflict affected societies seriously demand (Bano, 2009; Rosenblum, 2003). The constructive role of such organizations thus attracts the individuals in conflict zone to participate more in these organizations to compensate their loss.

To capture the heterogeneous impacts of conflict shock, we rely on the estimates of SRDD. The coefficients associated to conflict in panel A predict that immediately

Table 2. 16: Participation in Welfare Religious Organizations (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.655***	0.656***	0.657***	0.500***	0.504***	0.505***
	(0.022)	(0.022)	(0.022)	(0.027)	(0.027)	(0.027)
Region Dummy	0.007	0.007	0.008	0.033	0.026	0.024
	(0.022)	(0.022)	(0.022)	(0.027)	(0.027)	(0.027)
Constant	2.016***	2.262***	2.265***	1.895***	2.243***	2.301***
	(0.019)	(0.204)	(0.226)	(0.021)	(0.356)	(0.378)
Observations	800	800	800	800	800	800
R-squared	0.530	0.531	0.532	0.310	0.316	0.319
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 17: Participation in Welfare Religious Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.179***	0.194***	0.144***	0.136***	0.150***	0.107***
	(0.010)	(0.011)	(0.009)	(0.012)	(0.013)	(0.010)
Border Distance	0.005**	0.021***	-0.001	0.008***	0.024***	-0.002
	(0.002)	(0.004)	(0.002)	(0.002)	(0.005)	(0.002)
Constant	2.160***	1.068**	2.172***	1.716***	0.791	2.711***
	(0.331)	(0.520)	(0.376)	(0.587)	(0.910)	(0.603)
Observations	348	165	287	348	165	287
R-squared	0.528	0.671	0.518	0.307	0.487	0.333
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

after conflict, the individuals in highly affected area exhibited higher average participation in welfare religious organizations (0.194) than moderately (0.179), and least affected (0.144) regions' individuals. Similarly, the panel B estimates support the earlier trend even after nine years later of conflict. For instance, the highly exposed individuals exhibited comparatively high average (0.150) participation in welfare religious organizations as compared to the moderately (0.136), and least affected (0.107) regions' individuals.

The increase in the participation in welfare religious organizations seems a promising in case of district Swat. In the district, two political welfare religious organizations, namely, Al-Khidmat foundation and Ummah welfare trust initiated various social welfare programs. These organizations distributed food, installed health camps, and provided micro financial funds to the victims, with more focus on highly affected areas. These development approaches of the welfare religious organizations encouraged the individuals to participate in their meetings to take benefits from their services.

2.5.3.3. Participation in Non-Welfare Religious Organizations

The following tables 2.22 and 2.23 exhibit the OLS and SRDD estimates of conflict shock on participatory behavior of individuals in non-welfare religious organizations, respectively. Whereas, the panel A and B depict the 2010 and 2018 participation level of inhabitants in these organizations, respectively. The coefficient associated to conflict in all the specifications of the tables appear negative significant which suggest that conflict shock decreased the level of participation in non-welfare religious organizations. The OLS estimate in panel A predicts that immediately after conflict, the participation of the individuals in non-welfare religious organizations decreased on average by 0.478 percent points as compared to non-affected individuals. Whereas, the

Table 2. 18: Participation in Non-Welfare Religious Organizations (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.477***	-0.477***	-0.478***	-0.380***	-0.381***	-0.382***
	(0.031)	(0.031)	(0.031)	(0.028)	(0.028)	(0.028)
Region Dummy	0.001	0.001	0.004	-0.013	-0.012	-0.008
	(0.031)	(0.031)	(0.031)	(0.028)	(0.028)	(0.029)
Constant	2.301***	1.646***	1.534***	2.370***	2.051***	1.978***
	(0.024)	(0.280)	(0.298)	(0.023)	(0.400)	(0.426)
Observations	800	800	800	800	800	800
R-squared	0.234	0.239	0.251	0.186	0.187	0.191
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 19: Participation in Non-Welfare Religious Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.132***	-0.166***	-0.097***	-0.107***	-0.138***	-0.077***
	(0.014)	(0.015)	(0.011)	(0.013)	(0.015)	(0.010)
Border Distance	-0.011***	-0.030***	0.004**	-0.009***	-0.023***	0.004**
	(0.003)	(0.006)	(0.002)	(0.002)	(0.005)	(0.002)
Constant	2.142***	2.303***	1.620***	1.773***	3.043***	2.837***
	(0.456)	(0.696)	(0.469)	(0.620)	(0.940)	(0.698)
Observations	348	165	287	348	165	287
R-squared	0.290	0.517	0.262	0.201	0.442	0.195
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

region dummy appears insignificant, which suggests that there observed no difference in the participation behavior of urban and rural regions' individuals in non-welfare religious organizations. Furthermore, the panel B estimate suggests that after nine years of conflict termination, the average participation in religious organizations of conflict affected individuals remained lower on average by 0.382 percent points. Whereas, the fall in participation homogenously prevailed across the urban and rural regions, as shown by the region dummy.

The fall in participation in non-welfare religious organizations occurs because these organizations often adopt extreme version of religious teachings. This radicalization leads them to a point where such organizations become the driving force of extremism promotion. However, even if they become neutral, they are viewed suspicious for their unjust behavior (Alexiev, 2005; Azam, 2010). Consequently, the inhabitants avoid participation in non-welfare religious organizations to avoid the risk of victimization.

The SRDD estimates confirm the heterogeneous impacts of shock. The panel A estimates depict that highly exposed region's individuals exhibited lower average participation in non-welfare religious organizations (-0.166) than moderately (-0.132), and least affected (-0.097) regions' individuals. The panel B estimates confirm the same trend, the highly exposed individuals even nine years later of conflict exhibited lower average participation (-0.138) in religious organizations than moderately (-0.107) least affected (-0.077) individuals in the regions.

The aforementioned findings are relevant to our study area. The religious organizations in the district preach religious values in the district. Although, these organizations not explicitly remained the part of militant's wing, however, their religious struggle implicitly provided support to the militants' views. Additionally,

even if these organizations remained neutral during conflict, they were considered suspicious for not opposing the un-Islamic behavior of militants. Consequently, the inhabitants of the district lowered participation in such organizations. Whereas, such decreased participation observed high in case of highly affected area.

2.5.4. Cooperation

2.5.4.1. Cooperation with Welfare Religious Organizations

The tables 2.24 and 2.25 report the OLS and SRDD estimates of conflict shock on the level of cooperation of individuals with welfare religious organizations, respectively. Whereas, the panel A and B depict the cooperation level in 2010 and 2018, respectively. The associated coefficients to conflict appear positive and significant in all the specifications of the tables, which suggest that individuals' cooperation in post-conflict life increased with welfare religious organizations. The OLS estimate in panel A suggests that immediately after the conflict shock the level of cooperation with welfare religious organizations increased on average by 0.574 percent points as compared to the non-victims. Whereas, there observed no difference in the cooperation behavior of urban and rural regions' individuals, as shown by the insignificant dummy variable. Additionally, similar trend continued over time. The panel B estimates suggest that after nine years later of conflict, though the magnitude of cooperation decreased, yet the cooperation of the conflict affected individuals on average remained high by0.503 points. Whereas, like the earlier finding the effect homogenously prevailed across the urban and rural regions' individuals.

As mentioned earlier, these organizations with political objectives forms various strategies that help the conflict affected individuals to recover from the shock. For instance, these organizations provide various from of services like donations, provide funds and also act like a supplier of public goods. Consequently, their welfare

Table 2. 20: Cooperation with Welfare Religious Organizations (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.496***	0.495***	0.496***	0.349***	0.354***	0.350***
	(0.031)	(0.031)	(0.032)	(0.035)	(0.034)	(0.035)
Region Dummy	0.015	0.014	0.012	0.043	0.038	0.036
	(0.031)	(0.031)	(0.032)	(0.036)	(0.036)	(0.036)
Constant	2.627***	2.692***	2.597***	2.484***	3.570***	3.278***
	(0.026)	(0.279)	(0.328)	(0.027)	(0.474)	(0.511)
Observations	800	800	800	800	800	800
R-squared	0.244	0.244	0.247	0.116	0.122	0.130
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 21: Cooperation with Welfare Religious Organizations (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.137***	0.171***	0.115***	0.107***	0.130***	0.092***
	(0.013)	(0.021)	(0.011)	(0.014)	(0.020)	(0.012)
Border Distance	0.005**	0.031***	-0.002	0.016***	0.027***	-0.005**
	(0.003)	(0.008)	(0.002)	(0.003)	(0.007)	(0.002)
Constant	3.130***	0.193	2.127***	2.183***	2.297*	4.108***
	(0.462)	(0.880)	(0.510)	(0.707)	(1.223)	(0.777)
Observations	348	165	287	348	165	287
R-squared	0.281	0.402	0.311	0.221	0.314	0.202
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

support initiative in conflict-affected region motivate the individuals to extend their support for such organizations.

The SSRD estimate the heterogeneous impacts of conflict shock on cooperation behavior of individuals with welfare religious organizations. The SRRD estimates in panel A and B show that individuals in highly affected region exhibited comparatively high average cooperation with welfare religious organizations (0.171, 0.130) than individuals in the moderately (0.137, 0.110), and least affected (0.115, 0.092) regions.

The increase in cooperation with welfare religious organizations seems promising as for our study area is concerned. As mentioned earlier, the welfare religious organizations identified the most urgent demands of inhabitants and devised various policies that helped that inhabitant to minimize the cost of conflict. For instance, they distributed food, installed health camps, and provided micro financial funds to the victims, with more focus on highly affected areas. These development approaches of the welfare religious organizations encouraged the individuals to cooperate more with them to benefit from their services.

2.5.4.1. Cooperation with Non-Welfare Religious Organizations

The tables 2.26 and 2.26 report the OLS and SRDD estimates of conflict shock on the level of cooperation of individuals with non-welfare religious organizations, respectively. Whereas, the panel A and B depict the cooperation level in 2010 and 2018, respectively. The associated coefficients to conflict appear negative and significant in all the specifications of the tables, which suggest that individuals' cooperation in post-conflict life decreased with non-welfare religious organizations. The OLS estimate in panel A suggests that immediately after conflict the level of cooperation with non-welfare religious organizations decreased on average by 0.683 percent points as compared to the non-victims. Whereas, there observed no difference in the cooperation

Table 2. 22: Cooperation with Non-Welfare Religious Organizations (OLS)

	Panel (A)			Panel (B)		
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.685***	-0.686***	-0.683***	-0.557***	-0.556***	-0.556***
	(0.040)	(0.039)	(0.040)	(0.037)	(0.038)	(0.038)
Region Dummy	-0.019	-0.019	-0.018	-0.008	-0.010	-0.008
	(0.040)	(0.040)	(0.040)	(0.038)	(0.038)	(0.038)
Constant	3.213***	2.348***	2.329***	3.280***	2.963***	2.992***
	(0.030)	(0.366)	(0.394)	(0.029)	(0.535)	(0.557)
Observations	800	800	800	800	800	800
R-squared	0.275	0.281	0.285	0.218	0.220	0.222
Economic Controls	No	Yes	Yes	No	Yes	Yes
Demographic Controls	No	No	Yes	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. 23: Cooperation with Non-Welfare Religious Organizations (SRDD)

				Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.193***	-0.232***	-0.138***	-0.161***	-0.191***	-0.101***
	(0.018)	(0.021)	(0.012)	(0.017)	(0.020)	(0.012)
Border Distance	-0.017***	-0.036***	0.001	-0.017***	-0.036***	0.005**
	(0.004)	(0.008)	(0.002)	(0.003)	(0.007)	(0.002)
Constant	3.071***	3.896***	2.520***	2.113**	5.702***	4.245***
	(0.606)	(0.962)	(0.511)	(0.839)	(1.203)	(0.770)
Observations	348	165	287	348	165	287
R-squared	0.344	0.505	0.339	0.280	0.505	0.240
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

behavior of urban and rural regions' individuals, as shown by the insignificant dummy variable. Additionally, similar trend continued over time. The panel B estimates suggest that after nine years later of conflict, though the magnitude of cooperation improved, yet the cooperation of the conflict affected individuals on average remained lower on by 0.556 percent points. Whereas, like the earlier finding the effect homogenously prevailed across the urban and rural regions' individuals.

The drop in the level of cooperation with non-welfare religious organizations attributed to extreme interpretation of theological values which create support for militants' groups. Additionally, these organizations restrict political development because of their apolitical approach to underlined issues. Hence, the distrustful behavior of religious organizations halts individual cooperation in conflict-affected zone to avoid the risk of victimization.

For the heterogeneous impacts of shock, we rely on the estimates of SRDD. The coefficients associated to conflict in panel A suggest that immediately after conflict termination, the individuals in highly affected region showed lower average cooperation with non-welfare religious organizations (-0.232) than moderately (-0.193), and least affected (-0.138) regions' individuals. Similarly, the panel (B) estimates support the earlier trend over time. The highly exposed individuals even after nine years of conflict revealed lower average cooperation (-0.191) with non-welfare religious organizations as compared to the moderately (-0.161), and least affected (-0.101) individuals in the regions.

The aforementioned findings are relevant to our study area. The non-welfare religious organizations only promoted the religious values and not remained the main player in conflict. However, their religious struggle implicitly promoted the views of militants groups. Additionally, even if these organizations did not show affiliation to

militants group, they never explicitly opposed their violent actions. Consequently, the suspicious behavior of these organizations resulted in lower cooperation of the inhabitants with them. Furthermore, this effect appears more prominent in case of the highly affected area as compared to moderately and least affected areas individuals because they (highly affected areas individual) witnessed more irrational behavior of such organizations.

2.6. Conclusion

The purpose of this study was to examine the impact of conflict on religious preferences by providing evidence from the violent conflict, which occurred in the district Swat of Khyber Pakhtunkhwa (KP), Pakistan. The conflict in the district erupted when an organized group of militants started an armed struggle to implement Sharia laws in the region. Whereas, to eliminate insurgency, the government conducted heavy military operation. The conflict, which continued for years in the valley, primarily followed the religious dimensions, which provided us an interesting setting to explore its impact on religious preferences of individuals in post-conflict life. To unveil the religious dimensions of conflict, we take various dimensions of religious preferences. These include fundamental rituals and humanistic values, the religious trust, participation, and cooperation. Additionally, to examine the causal impact, we identified district Buner – a neighboring district as a control group. We collected data from 400 households in each district and applied the OLS and SRDD estimation techniques. The OLS findings suggested the exposure to conflict promoted the practice of fundamental rituals and strengthened religious humanistic values. Similarly, conflict adversely caused the trust on religious seminaries, religious figures and non-welfare religious organizations. However, it improved the trust on welfare religious organizations. Likewise, the conflict decreased the level of participation in religious gathering and non-welfare

religious organizations. However, promoted participation in welfare religious organizations. Finally, the occurrence of conflict shock discouraged the cooperation with non-welfare religious organizations. However, encouraged cooperation with welfare religious organizations. Additionally, supporting the OLS findings, the SRDD estimates reported heterogeneous impact of conflict shock on religious preferences. The individuals that resided in highly exposed area exhibited comparatively higher changes in religious preferences than moderately and least affected individuals.

As obvious, the occurrence of violent conflict significantly shifts the religious preferences. It thus provides some best settings to the public authorities to formalize the structure of religious institutions to avoid the likelihood of future conflict in the region.

References

Alexiev, A. (2005). Tableeghi Jamaat: Jihad's stealthy legions. Middle East Quarterly.

Acock, A. C., & Bengtson, V. L. (1978). On the relative influence of mothers and fathers: A covariance analysis of political and religious socialization. Journal of Marriage and the Family, 519-530.

Albrecht, S. L., & Cornwall, M. (1989). Life events and religious change. Review of Religious Research, 23-38.

Ali, T. (2009). 'Dir Linking Waziristan and Swat', Weekly Pulse, Islamabad, 7 May.

Astin, M. C., Lawrence, K. J., & Foy, D. W. (1993). Posttraumatic stress disorder among battered women: Risk and resiliency factors. Violence and victims, 8(1), 17.

Azam, M. (2010). Religious behaviors in Pakistan: impact on social development. Pakistan Institute for Peace.

Bano, M. (2009). Marker of identity: religious political parties and welfare work-the case of Jama'at-i-Islami in Pakistan and Bangladesh.

Bauer, M., Blattman, C., Chytilová, J., Henrich, J., Miguel, E., & Mitts, T. (2016). Can war foster cooperation?. Journal of Economic Perspectives, 30(3), 249-74.

Baumeister, R. F. (1991). Meanings of life. Guilford Press.

BBC News, South Asia (2009). 'Pakistan to Probe Girl's Flogging', 3 April: http://news.bbc.co.uk/2/hi/ 7980899.stm.

Berger, P. L. (2015). The sacred canopy. In Sociology of Religion (pp. 21-26). Routledge.

Ben-Ezra, M., Palgi, Y., Sternberg, D., Berkley, D., Eldar, H., Glidai, Y., & Shrira, A. (2010). Losing my religion: A preliminary study of changes in belief pattern after sexual assault. Traumatology, 16(2), 7.

Berger, P. L. (1992). A far glory: The quest for faith in an age of credulity. Anchor.

Bénabou, R., Ticchi, D., & Vindigni, A. (2013). Forbidden fruits: The political economy of science, religion, and growth.

Blum, U., & Dudley, L. (2001). Religion and economic growth: was Weber right?. Journal of Evolutionary Economics, 11(2), 207-230.

Bolks, S., & Stoll, R. (2003). Examining conflict escalation within the civilizations context. Conflict Management and Peace Science, 20(2), 85-109.

Bonanno, G. A., & Jost, J. T. (2006). Conservative shift among high-exposure survivors of the September 11th terrorist attacks. Basic and Applied Social Psychology, 28(4), 311-323.

Carmil, D., & Breznitz, S. (1991). Personal Trauma and World View—Are extremely stressful experiences related to political attitudes, religious beliefs, and future orientation? Journal of Traumatic stress, 4(3), 393-405.

Chemtob, C., Roitblat, H. L., Hamada, R. S., Carlson, J. G., & Twentyman, C. T. (1988). A cognitive action theory of post-traumatic stress disorder. Journal of anxiety disorders, 2(3), 253-275.

Clarke, M. (2016). Points of equilibrium: religious beliefs and economic development policy. Sustainable Development, 24(3), 181-189.

Decker, L. R. (1993). Beliefs, post-traumatic stress disorder, and mysticism. Journal of Humanistic Psychology, 33(4), 15-32.

Falsetti, S. A., Resick, P. A., & Davis, J. L. (2003). Changes in religious beliefs following trauma. Journal of Traumatic Stress, 16(4), 391-398.

Fase, M. M. (2005). On economics and religion. De Economist, 153(1), 85.

Fatih, A. (2018). Countering Violent Extremism in Afghanistan. Youth Radicalization and Violent Extremism in South Asia, 26.

Finnbogason, D., & Svensson, I. (2018). The missing jihad. Why have there been no jihadist civil wars in Southeast Asia?. The Pacific Review, 31(1), 96-115.

Fox, J. (2005). Religion, civilization, and civil war: 1945 through the new millennium. Lexington Books.

Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder. Behavior therapy, 20(2), 155-176.

Fox, J. (1998). The effects of religion on domestic conflicts. Terrorism and Political Violence, 10(4), 43-63.

Frankl, V. E. (1963). Man's Search for Meaning: An Introduction to Logotherapy. American Journal of Orthopsychiatry, 33(2), 390-390.

Gartzke, E., & Gleditsch, K. S. (2006). Identity and conflict: Ties that bind and differences that divide. European Journal of International Relations, 12(1), 53-87.

Gunning, J., & Jackson, R. (2011). What's so 'religious' about 'religious terrorism'?. Critical Studies on Terrorism, 4(3), 369-388.

Haqqani, H. (2002). Islam's medieval outposts. Foreign Policy, (133), 58.

Haynes, J. (2007). Religion and development: conflict or cooperation?. Springer.

Henrich, J., Bauer, M., Cassar, A., Chytilová, J., & Purzycki, B. G. (2019). War increases religiosity. Nature Human Behaviour, 3(2), 129.

Hilali, A. (2009). Swat's Worst Humanitarian Crisis'. The Frontier Post.

Horowitz, M. J., Bonanno, G. A., & Holen, A. (1993). Pathological grief: diagnosis and explanation. Psychosomatic Medicine, 55(3), 260-273.

Howenstein, N. (2006). Islamist Networks: The Case of Tablighi Jamaat. Washington: The United States Institute for Peace.

Huntington, S. P. (1993). The clash of civilizations?. Foreign affairs, 22-49.

Inglehan, R. (1999). Trust, well-being and democracy. Democracy and trust, 88.

Jenkins, P. (2014). The great and holy war: how World War I changed religion forever. Lion Books.

Juergensmeyer, M. (2017). Terror in the mind of God: The global rise of religious violence (Vol. 13). Univ of California Press.

Kennedy, K.A. (1989). Gallup poll on religion: Social demographics for intrinsic and extrinsic religious orientation. Unpublished doctoral dissertation, Graduate School of Psychology, Fuller Theological Seminary, Pasadena, CA.

Kirmani, N. (2008). Religion and Development: Conflict or Cooperation?; Development and Faith: Where Mind and Soul Work Together: Jeffrey Haynes; Katherine Marshall and Marisa Van Saanen.

Klauer, B., Manstetten, R., Petersen, T., & Schiller, J. (2016). Sustainability and the Art of Long-term Thinking. Taylor & Francis.

Kronstadt, K. A. (2010). Pakistan: Key current issues and developments. LIBRARY OF CONGRESS WASHINGTON DC CONGRESSIONAL RESEARCH SERVICE.

Koenig, H. G., George, L. K., & Siegler, I. C. (1988). The use of religion and other emotion-regulating coping strategies among older adults. The Gerontologist, 28(3), 303-310.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Trust in Large Organizations. The American Economic Review, 333-338.

Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. Psychological bulletin, 85(5), 1030.

Lifton, R. J. (2012). Death in life: Survivors of Hiroshima. Univ of North Carolina Press.

Lindholm, C. (1979). Contemporary politics in a tribal society: Swat District, NWFP, Pakistan. Asian Survey, 19(5), 485-505.

Masood, A. 2009, 'How Green was My Valley' in Foreign Policy Journal, 25 May: www.e-ariana.com/ ariena/eariana.nsf/articles/, accessed 27 March 2010.

Maley, W. (1999). The Foreign Policy of the Taliban. Council on Foreign Relations.

McCleary, R., & Barro, R. (2003). Religion and Economic Growth across Countries. Harvard University Department of Economics.

McCleary, R. M., & Barro, R. J. (2006). Religion and political economy in an international panel. Journal for the scientific study of religion, 45(2), 149-175.

McCrae, R. R. (1984). Situational determinants of coping responses: Loss, threat, and challenge. Journal of personality and Social Psychology, 46(4), 919.

McNamara, R. A., Norenzayan, A., & Henrich, J. (2016). Supernatural punishment, in-group biases, and material insecurity: Experiments and ethnography from Yasawa, Fiji. Religion, Brain & Behavior, 6(1), 34-55.

McIntosh, D. N. (1995). Religion-as-schema, with implications for the relation between religion and coping. The International Journal for the Psychology of Religion, 5(1), 1-16.

Meisenhelder, J. B., & Marcum, J. P. (2004). Responses of clergy to 9/11: Posttraumatic stress, coping, and religious outcomes. Journal for the Scientific Study of Religion, 43(4), 547-554.

A.H. Nayyar. (1998). Madrassa Education Frozen in Time in Hoodbhoy; 213- 250.

Nad, S., Marcinko, D., Vuksan-Æusa, B., Jakovljevic, M., & Jakovljevic, G. (2008). Spiritual well- being, intrinsic religiosity, and suicidal behavior in predominantly Catholic Croatian war veterans with chronic posttraumatic stress disorder: A case control study. The Journal of nervous and mental disease, 196(1), 79-83.

O'Brien, J., & Palmer, M. (2016). The atlas of religion. Univ of California Press.

Orakzai, S. B. (2011). Conflict in the Swat Valley of Pakistan: Pakhtun culture and peacebuilding theory-practice application. Journal of Peacebuilding & Development, 6(1), 35-48.

Pargament, K. I., Ensing, D. S., Falgout, K., Olsen, H., Reilly, B., Van Haitsma, K., & Warren, R. (1990). God help me: (I): Religious coping efforts as predictors of the outcomes to significant negative life events. American journal of community psychology, 18(6), 793-824.

Park, C. L. (2005). Religion as a meaning-making framework in coping with life stress. Journal of social issues, 61(4), 707-729.

Piazza, J. A. (2009). Is Islamist terrorism more dangerous?: An empirical study of group ideology, organization, and goal structure. Terrorism and Political Violence, 21(1), 62-88.

Purzycki, B. G., Apicella, C., Atkinson, Q. D., Cohen, E., McNamara, R. A., Willard, A. K., ... & Henrich, J. (2016). Moralistic gods, supernatural punishment and the expansion of human sociality. Nature, 530(7590), 327.

Rahman, T. (2007). Madrasas: the potential for violence in Pakistan?. In Madrasas in South Asia (pp. 71-94). Routledge.

Rakodi, C. (2012). Religion and development: subjecting religious perceptions and organisations to scrutiny. Development in Practice, 22(5-6), 621-633.

Resick, P. A., & Schnicke, M. K. (1990). Treating symptoms in adult victims of sexual assault. Journal of Interpersonal Violence, 5(4), 488-506.

Roggio, B. (2007). Pakistan releases Taliban leader Sufi Mohammed. Long War Journal.

Roggio, B. (2009). Pakistan to end military operation and implement sharia in Malakand Division. The Long War Journal.

Rome, S. (2011). Crisis and reconciliation in Swat. Pakistaniaat: A Journal of Pakistan Studies, 3(1), 53-79.

Rome, S. (2008), 'Women's Right to Land Ownership in Swat State Area: The Swat State Area and Post-state Scenario' in Pakistan Vision 8: 2: 116-141.

Rosenblum, N. L. (2003). Religious parties, religious political identity, and the cold shoulder of liberal democratic thought. Ethical theory and moral practice, 6(1), 23-53.

Saab, B. R., Chaaya, M., Doumit, M., & Farhood, L. (2003). Predictors of psychological distress in Lebanese hostages of war. Social Science & Medicine, 57(7), 1249-1257.

Siddique, Q. (2010). *Tehrik-e-Taliban Pakistan: An attempt to deconstruct the umbrella organization and the reasons for its growth in Pakistan's north-west* (No. 2010: 12). DIIS Report.

Siddique, Q. (2008). The Red Mosque operation and its impact on the growth of the Pakistani Taliban.

Scholte, W. F., Olff, M., Ventevogel, P., de Vries, G. J., Jansveld, E., Cardozo, B. L., & Crawford, C. A. G. (2004). Mental health symptoms following war and repression in eastern Afghanistan. Jama, 292(5), 585-593.

Schwartzberg, S. S., & Janoff-Bulman, R. (1991). Grief and the search for meaning: Exploring the assumptive worlds of bereaved college students. Journal of Social and Clinical Psychology, 10(3), 270-288.

Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., & Berry, S. H. (2001). A national survey of stress reactions after the

September 11, 2001, terrorist attacks. New England Journal of Medicine, 345(20), 1507-1512.

Seirmarco, G., Neria, Y., Insel, B., Kiper, D., Doruk, A., Gross, R., & Litz, B. (2012). Religiosity and mental health: Changes in religious beliefs, complicated grief, posttraumatic stress disorder, and major depression following the September 11, 2001 attacks. Psychology of Religion and Spirituality, 4(1), 10.

SHARIFI, A. (2016). PEACEBRIEF216.

Singer, P. W. (2001). Pakistan's madrassahs: Insuring a system of education not jihad.

Stulz, R. M., & Williamson, R. (2003). Culture, openness, and finance. Journal of financial Economics, 70(3), 313-349.

Svensson, I., & Nilsson, D. (2018). Disputes over the Divine: Introducing the Religion and Armed Conflict (RELAC) Data, 1975 to 2015. Journal of Conflict Resolution, 0022002717737057.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: a social psychological perspective on mental health. Psychological bulletin, 103(2), 193.

Taylor, A. J. W., Nailatikau, E., & Walkey, F. H. (2002). A hostage trauma assignment in Fiji. Australasian Journal of Disaster and Trauma Studies.

Toft, M. D. (2006). Religion, Civil War, and International Order. International Security Program, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University.

Wadsworth, M. E. J., & Freeman, S. R. (1983). Generation differences in beliefs: a cohort study of stability and change in religious beliefs. British Journal of Sociology, 416-437.

Wagner, A. (2001). Coping. National Journal, 41, 3206.

Walker, J. L. (2000, June). Building the legal and regulatory framework. In Conference Series- Federal Reserve Bank of Boston (Vol. 44, pp. 31-66). Federal Reserve Bank of Boston; 1998.

Wolffe, J. (2011). Protestant–Catholic Divisions in Europe and the United States: An Historical and Comparative Perspective. Politics, Religion & Ideology, 12(3), 241-256.

Walker, D. F., Reid, H. W., O'neill, T., & Brown, L. (2009). Changes in personal religion/spirituality during and after childhood abuse: A review and synthesis. Psychological Trauma: Theory, Research, Practice, and Policy, 1(2), 130.

Van Biema, D., Cole, W., & Philadelphia, D. (2001). Faith After the Fall. Time, 158(16), 76-76.

Vüllers, J., Pfeiffer, B., & Basedau, M. (2015). Measuring the ambivalence of religion: Introducing the religion and conflict in developing countries (rcdc) dataset. International Interactions, 41(5), 857-881.Yusafzai, R. (2009). 'The Man that is Sufi Muhammad', News International, Islamabad, 25 May.

Chapter 3

Violent Conflict and Informal Justice Institution

3.1. Introduction

Institutions are the rules of the game that shape human interactions in a society (North, 1990). Alternatively, institutions are the long-run rules of an economy, which serve like a public good and monitor contracts of the agents to reduce the transaction cost (Olsson, 1999). Since, institutions outlines interaction path, they therefore assist individuals in expectation formation in presence of uncertainty and asymmetric information. Subsequently, institutions not only limit choices set, but also offer a set of opportunities for individuals (Adams and Neale, 1997).[39]

Institutions are categorized into the formal and informal rules. The formal rules are formed, conveyed, and implemented through the formal mechanism. In contrast, the informal rules are developed, narrated, and executed by a society informal actors (Helmke and Levitsky, 2004).[40] The later structure is self-enforcing, stable, learned through socialization, and depict agents' best response to each other in a society. Additionally, it encompasses all the strategies of the agents in a society, therefore, monitor and restrict those actions, which are not taken into account by the formal rules. Consequently, informal institutions are theorized as residual category. Additionally, the informal structure offers conditional enduring structure to the effectiveness, sustainability, and reforms of the state's formal institutions (Voigt, 2013). Hence, these rules suggestively shape the outcomes of external rules by formulating and

[39] In absence of institutions, there would be no reason that self-interested agents would not participate in an endless war of all against all in the extraction of limited resource (Olsson, 1999).

[40] Formal institutions include a constitution and laws, regulations, and written contracts. Contrariwise, informal institutions, which are in fact integrated part of the culture, include norms, ethics, taboos, and customs.

strengthening incentives comply with the external rules, i.e. they provide a supporting base to the formal institutional structure (Hodgson, 2006).

The informal institutions include a variety of social structure; among them, the informal justice system claims an essential place. The notion of the informal justice refers to an indigenous institutional mechanism based on customary norms that assists the inhabitants to resolve their social and interpersonal disputes within defined social frame (Röder, 2012). Wojkowska describes informal justice systems as, "a dispute resolution mechanism falling outside the scope of the formal justice system" (Wojkowska, 2006).[41] Informal justice system resolves important issues of the individuals and communities, such as local crime, protection of land, resolution of family disputes, and access to public services. Hence, informal mechanism plays an important role to maintain social order and provide costless access to justice (Ricken, 2013; Vel, 2011).[42] Although, the informal justice system works outside the formal court systems, yet such structure possess a certain degree of stability, institutionalization, and legitimacy within a designated constituency (Ricken, 2013). However, the structure of informal justice system varies from context to context. For instance, some retains greater legitimacy and acceptance through competence with formal justice system (Thorne, 2005). However, other become outlawed due to overwhelming the authority of formal system (Wourji, 2012; Wojkowska, 2006).

[41] Nonetheless, they may be obliged to adhere to state law, and they can even be formally incorporated into the state court system, such as the Ethiopian Kebele Social Courts that are formal state organs that provide court-like decisions applying shimglina, a traditional mechanism of arbitration. However, even if the law formally recognizes and incorporates them, these institutions stand out of the official state and are perceived as "informal" by the people.

42 The informal justice institutions efficiently operational in less developed economies. For instance, Community courts (Mozambique), local council courts (Uganda), local courts using informal procedures (Zambia), government administered Shalish (Bangladesh), Juntas Vecinales (Bolivia), justice of the peace courts (Guatemala).

Informal justice system is usually regulated by traditional leaders, religious authorities, and community leaders (Capp, 2018). It is informal system in the sense that it applies unofficial methods of conflict resolution (Faundez, 2003). Similarly, the proceedings under informal justice system are carried out according to local practices and native language. This make the system comprehensible and culturally comfortable (Ricken, 2013; Wojkowska, 2006). Additionally, in criminal matters, contrary to formal system, the informal justice system not always punishes the perpetrator. Yet, in various cases it formulates procedures that compensates the victim, prevents criminal actions, and includes both the victims and culprits back into the social process (Ricken, 2013). This approach to justice is necessary in communities that rely heavily on social and economic cooperation.

Additionally, the informal justice mechanism resolves dispute quickly, therefore, citizens prefer such system as alternative to the formal justice system, which is characterized by drawn out complex process (Faundez, 2006; Chirayath, 2005). Similarly, the informal justice system comprehends the fundamentals of indigenous problems and is flexible to any issue. Hence, the system finds appropriate and practical solutions to the underlined communal problems. This inspires the inhabitants to consider the informal justice system as the most likely way of achieving outcomes that satisfies their sense of justice (Tobin, 2011).

As a social structure, the informal justice system is considered a stable and lag dependent. The change in any social structure is attributed to a wider process of social evolution (Klauer *et al.,* 2016).[43] Yet, such structure is observed endogenous to various

[43] A variety of evidences divulges that the controlled institutional structure introduced by the non-settler colonizers persisted even after the colonial regimes ended.

shocks (Austin, 2008).[44] Historical evidences support that conflict shocks at different points of time in the world have changed the trajectory of institutions (Gáfaro *et al.*, 2014; Acemoglu and Robinson, 2013). Whereas, such forms of institutional transformations have profound implications for the survival and security of civilians and their post-conflict recovery (Gáfaro *et al.*, 2014).

Undeniably, conflict shock brings undesirable changes. For instance, it provokes income inequality, surges transaction cost, and destroys nation' physical and human capital (Bircan *et al.*, 2017; Bircan *et al.*, 2017; Justino *et al.*, 2013; Leon, 2012; Collier, 2003). Besides, conflict promotes mass killing and causes forced displacement (Melander and Pettersson, 2016; Czaika and Kis-Katos, 2009). Nevertheless, in various cases, the conflict shock is observed associated with social transformation (Voors *et al.*, 2012). It is believed that people who live through violence become civic-minded, develop social networks, and behave more cooperatively (Bauer *et al.*, 2016; Gáfaro *et al.*, 2014; Parkinson, 2013; Voors *et al.*, 2012).

With aforementioned social chnages, the occurrence of conflict shock potentially alters the inherent features of informal rules. Hence, the formation of new or transformation of existing institutions should not be an unexpected process. Institutional change in conflict zone happens when different players such as state actors, non-state-armed groups, and common citizens form different strategies. Nevertheless, the literature overlooks the formation of their choices in post-conflict life (Gáfaro *et al.*, 2014).[45] For instance, how these players form choices, i.e. establish a new set of

[44] Institutions respond to changes in people expectations, they are not purely exogenous, but must be self-enforcing in nature. Individuals, in order to solve collective action problem, inforce property rights, minimize the risk of victimization and avoid market failure often form institutions. For detail, discussion see also, Ostrom (2015), Skarbek (2011) and Gambetta (1996).

[45] Usually, violent conflicts are theorized as "off the equilibrium path of political order", rather considering them catalyst to the emergence of a new set of institutions, see also Kalivas *et al.* (2008).

institutions in conflict zones (Arjona, 2014). Suggestive evidence from various violent episodes depicts that conflict has not only changed the formal structure, yet, it also resulted in locally based, socially embodied and durable informal institutions such as 'Civil Patrol' in Guatemala, 'Sandinista Defense Committees' in Nicaragua, and 'informal courts' in Sri Lanka and other countries (Bateson, 2015; Acemoglu and Robinson, 2013; Sivakumaran, 2009; Aron, 2003; Skocpol, 1992).

Generally, new institutions in the conflict zones develop from the competing interest of different groups in the conflict zone. Theoretically, institutions during conflict develop from two different scenarios: (a) imposition, and (b) innovation. The imposition view of institutional change takes place when non-state actors struggle to introduce new institutions in the conflict zone that replace the formal structure. For instance, when the formal institutions become insufficient and inappropriate, various competing actors in a society try to cover the space by devising new institutions, which could support and secure their objectives (Arjona, 2010). For instance, to provide state alike institutions, the militants in Afghanistan developed law and order institutions (Dempsey and Coburn, 2010). Similarly, non-state armed actors established parallel informal justice system in Sri Lanka, EI Salvador and Sierra Leone (Sivakumaran, 2009). The formation of such institutions help the militants to rule over the local population, and secure their political and economic interest during and after the conflict (Riley, 2005 Arjona, 2013).[46]

Unlike the earlier view, the innovational change in institutional structure occurs when individuals and communities use their agency relationship to create new or alter the existing institutions for certain communal objectives. Usually, to solve communal

[46] The creation of Specific institutions allows the armed groups to shape the social, economic and political affairs of the area in such a way that benefit their organization in terms of recruitment and creating rents.

disputes, inforce property rights, minimize the risk of victimization, and avoid market failure, inhabitants form new institutions (Ostrom, 2015; Gambetta, 1996). In conflict zone, when the inhabitants experience physical and economic loss and breakdown of formal sanctioning mechanism, they form new institutions to minimize their loss and establish social order in a society. For instance, to secure the inhabitants' interest and avoid social unrest, the individuals in Afghanistan developed law and order institutions in the form of informal justice system, which resolve their 80 to 90% disputes (Allen and Macdonald, 2013; Wojkowska, 2006).

Driven from the aforementioned discussion, conflict shock has far-reaching impacts on a society. It redefines the existing social structure and binds together different peoples under one rule. Nevertheless, insufficient attention is devoted to the social aftermaths of conflict. Usually, the transformation of informal institutional structure is ignored in failing states and post-conflicts societies. When we overlook the institutional outcomes of conflict, we ignore an important dimension.

Indeed, conflict shock prmotes lawlessness, chaos and widespread disorder. Therefore, the inhabitants need a new mechansim which assists to maintan social order and resolves personal and communal disputes. In the conflict zone the informal justice system retains importance due to the breakdown of the ordered institutions. This system can play a crucial role in the stabilization and reconciliation process. Hence, it is important to inquire the dynamics of informal justice system in post-conflict life. Consequently, we examine the dynamics of informal justice system in post-conflict setting of district Swat of Khyber Pakhtunkhwa (KP) (formerly the North-West Frontier Province or NWFP), Pakistan. The valley Swat witnessed a deadly conflict when the non-state actors initiated an Islamic movement in 2004 (which later turned into violent conflict) to further their ideology in the region. The persistent conflict between non-

state armed groups and formal law enforcement agencies in the district for many years resulted in the destruction of physical infrastructure, civilian casualties, and breakdown of social and institutional structure in the region.

3.1.1. Objectives of the Study

This study is based on the following specific objectives:

1. To examine how conflict shock affects the Structure of Informal Justice System.
2. To assess the mechanism which delineates transformation in the Structure of Informal Justice System.

3.1.2. Significance of the Study

A society needs a variety of institutions to remain functional and productive. However, the outbreak of conflict not only affect its social structure, i.e. the inhabitants' relationship, it also interrupts the underlying formal institutional structure and leads to either partial or complete breakdown of ordered institutions in a society. In such settings the inhabitants use their agency relationships to form new or alter the existing institutions to cover the space left by the formal institutional structure to establish order in a society. For this purpose, they rely on the informal justice system. In this study, we analyze such transition by providing evidence from the conflict of District Swat. Additionally, the researchers inquire the economic cost associated with the conflict shocks in case of Pakistan. Nevertheless, the development discourse at the micro-level ignores the informal institutional transition in post-conflict life. The present study contributes to existing literature on conflict and its institutional aftermaths in two levels. Firstly, this study as a pioneer work in case of Pakistan explores that how the outset of conflict affect structure of informal justice system and defines its new equilibrium. Secondly, the study explores the mechanism, which stimulates transition towards informal justice system. This wide-ranging analysis of the informal institutions

enhances our understanding of the effects of the violent conflict on the informal institutional structure.

3.1.3. Organization of the Study

This study is organized as follows: the section 3.1 discusses the introduction part. Section 3.2 provides conflict history in district Swat. The section 3.3 outlines the literature review. The section 3.4 explains data, variables description, sampling technique, identification strategy, and methodology. Finally, the section, 3.5 and 3.6 provide discussion on results and conclusion, respectively.

3.2. Literature Review

Institutional legacy of conflict in terms of informal justice system remains an unexplored part of conflict literature. However, recently several researchers have attempted to explain how informal justice system emerge and evolve in response to conflict shocks. This section provides an overview of some of the prior studies on the issue.

To analyze the structure and effectiveness of informal justice system in post-setting, Isser *et al.* (2009) conducted a comprehensive study in the conflict-affected areas of Liberia. The authors found that the customary institutions and informal justice system effectively functioned in areas where the ordered institutions either collapsed or remained entirely absent. The authors also observed that the functionality of the informal justice system in war zone exhibited that they continued to be equally relevant throughout the country's rural counties. Furthermore, it is observed that social dynamics of war played an important role in the preferences transformation of individuals. The inhabitants in the conflict-affected zones urged that government should grant higher authority and legitimacy to customary justice practitioners and greater emphasis be placed on customary resolution mechanisms in order to swiftly resolve pressing issues.

Additionally, similar evidence emerged from Afghanistan. The long intense conflicts in the country resulted in the destruction of formal justice system. Wojkowska (2006) observed that an estimated 80-90% of the disputes settled through the informal justice or customary system in the areas of Afghanistan that exposed to high level of conflict. Similarly, from Sierra Leone, which also remained a conflict zone for many years, the Sriram (2007) observed that 85% of citizens did not use the facility of formal justice system and so relied on the informal measures of justice. Interestingly, such evidence is not only limited to the conflict zones, rather the fragile social structure also induces inhabitants to rely more on the informal justice system for quick solution of their disputes. The organization for economic and cultural development noted the more than 80% of the people in the fragile societies solve their disputes through the customary institutions (OECD, 2007).

The indigenous mechanism of conflict resolution is currently getting more attention in both the process of state building and counter-insurgency policy (Branch, 2011; MacGinty, 2008). In cases of vast scale atrocities and crimes, the functionality and effectiveness of the informal justice systems are viewed as rational choice. In such settings, it is not possible for the formal justice system to hold every culprit accountable. For instance, the Philip observed that to deal with the consequences of Rwanda's 1994 genocide, the 'Gacaca' courts (the informal justice system) emerged.[47] Under such system, more than 250,000 community elders offered their services in 11,000 jurisdictions to provide a speedy justice to the victims of genocide. This informal justice system mainly focused the severe accused and pursued the broader reparative goals of social healing and reconciliation. Additionally, the author observed that Gacaca courts

[47] At least 800,000 people had been killed during the violence and the country's jails were reaching bursting point with 120,000 alleged perpetrators and only fifteen judges able to oversee their 7 trials.

system remained more flexible and effective, where the mechanism in one village significantly differed than other in terms of effectiveness, proceedings, and social impacts (Philip, 2010 2009).

After the establishment of the Gacaca courts in Rwanda, the attention towards the informal justice system gained momentum. However, such mechanism did not result in a formalize typology in any international settlement. There is also diversity in state recognition of post-conflict traditional justice processes, ranging from de facto rejection to full incorporation in state laws (Wojkowska, 2006). For example, in Burundi, the National Council of Bashingantahe was formed through the constitutional approval to solve the disputes, including interethnic massacres and violence. This process was supported and facilitated by the foreign agencies. However, the government showed a very little support for the revival of such recolonized system of justice, which endow triable chiefs with significant power at the local level (Uvin, 2010; Dexter and Ntahombaye, 2006). Unlike in Mozambique, the official exhibited some flexibility to informal justice system and reconciliation rituals. In the country, the ordinary citizens have been involved in the Magamba spirit ceremonies to create a socio-cultural environment that promote the past and communal repair (Igreja, 2008). However, there has been no formal engagement or endorsement of these practices at the official part.

In contrast, in some other post-conflict places, such as Sierra Leone and East Timor, traditional justice has been officially recognized and sanctioned. The Sierra Leone Truth and Reconciliation Act authorized the Truth and Reconciliation Commission (TRC) to obtain help from the religious and community leaders to facilitate public hearing and resolve the local conflicts. However, the RTC mechanism remained weak to effectively solve the communal problems (Huyse and Salter, 2008;

Kelsall, 2005). Similarly, in East Timor, the government more extensively incorporated the customary laws into their Reception and Reconciliation Commission Community Hearings. The three parts of the reconciliation hearings involved a local dispute resolution practices; namely, nahe, biti, and boot (Drexler, 2009; Stanley, 2009). The hearings also incorporated long-established processes of adat or lisan to build local participation. In both Sierra Leone and East Timor, traditional justice has been used to supplement and legitimize more 'formal' transitional justice processes. However, Rwanda is the only country where the adapted traditional accountability mechanism has completely been included in the official post-conflict justice policy, and given the central role as a part of the formal state system (Wojowska, 2006).

However, there exists various instances in which the informal justice system has been used to challenge the formal system and social order. In Afghanistan, Afghan Civil Society Groups established the 'Victims Jirga' for demanding justice for the victims of conflict. The Jirga was established because of flawed and inconclusive government formed mechanism of justice. The Victims Jirga included over one hundred victims all over country and provided the first truly national articulation of a transitional justice agenda, including demands for prosecutions, truth seeking, and reparations (Kouvo and Mazoori, 2011). Likewise, 'Curative' spaces have been created by Women's Courts in Guatemala and Columbia. In Columbia, women have been holding regional tribunals in preparation for the launch of the permanent Columbian Women's Court against Forgetting and Re-existence (Quest, 2008). A hybrid of legal and non-legal procedures, the tribunals include rituals of apology and judgment by a panel of 'wise women'. In the case of the Victims Jirga and Women's Courts, traditional processes are being used by excluded populations to facilitate evidence and to formulate recommendations based

on these witnesses to the government. Nevertheless, whilst promising, these kinds of measures are far from widespread, and the existing problems.

The above literature inquired the structure (effectiveness) of informal justice system in post-conflict life. The studies like Isser *et al.* (2009), Wojkowska (2006), Sriram (2007), Philip (2010, 2009), Igreja (2008), and others documented that the customary institutions and informal justice system effectively functioned in areas where the ordered institutions either collapsed or remained entirely absent. Nevertheless, some studies like Kouvo and Mazoori (2011) and Quest (2008) showed that in some war-affected areas a hybrid system (combination of formal and informal system) has developed to solve the disputes quickly.

3.3. Variables Construction, Descriptive Statistics, and Methodology

3.3.1. Variables Description

The aim of this essay is to examine the impact of conflict on informal justice system and the channel that stimulates such transformation. We collect the data on the dimensions of informal justice system and ordered institutions using the earlier chapters' approach. Additionally, we use the same economic, demographic, and religious control controls in the empirical analysis that we use in the earlier chapter.

3.3.1.1. Informal Justice System

We measure the effectiveness of the informal justice system by an index which incorporates six dimensions. These dimensions include: (a) individuals trust on informal justice system, (b) their level of participation in informal justice system meetings, (c) their support for the verdicts of informal justice system, (d) the inhabitants preferences to solve their personal and communal disputes through informal justice system, (e) the effectiveness of the informal justice system in the solution of social and interpersonal disputes, and (f) the implementation and sustainability of the verdicts of informal justice system. We measure each of the dimension of the informal justice

system by a scale of 1 to 4. Whereas, 1 implies individuals' complete disagreement to any of the above category and 4 suggests their highest agreement level. To construct an index that explains the structure of informal justice system, we average the above dimensions.

3.3.1.2. Trust on Ordered Institutions

We measure the trust on ordered institutions by combining the trust of the individuals on three state organizations. These include: (a) the trust on judicial system, (b) trust on police, and (d) the trust on other law enforcement agencies. We quantify each trust level by scale of 1 to 4. Whereas, 1 implies the individuals no trust at all, while 4 suggests their highest level of trust on ordered institutions.

3.4.4. Descriptive Statistics

In the following table 3.1, the descriptive statistics of variables are given for the years 2010 and 2018, respectively. The descriptive statistics of each of the dimension of informal justice system depicts that the inhabitants of Swat give more weights to the informal justice system in post-conflict life than the inhabitants in Buner. For instance, immediately after conflict, the average trust, participation in meetings, and support for the verdicts of informal justice system remained high in district Swat (3.485, 3.020, 3.150) than district Buner (2.973, 2.020, 2.523), respectively. Similarly, the average disputes resolution though informal mechanism, its verdict effectiveness, implementation and sustainability remained high in district Swat (2.698, 2.718, 2.825) than district Buner (1.883, 2.185, 2.185), respectively. With these average values overall structure of informal justice mechanism appeared more effective in Swat (2.982) than Buner (2.244).

Additionally, immediately after conflict, the average trust on police, other law enforcement agencies, and judicial system remained lower in district Swat (2.340, 2.570, 2.230) as compared to district Buner (3.068, 3.058, 2.983), respectively. In other

Table 3. 1: Descriptive Statistics (2010)

	Swat (2010)				Buner (2010)			
Variables	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Trust on Informal Justice System	3.485	0.539	2	4	2.973	0.471	2	4
Participation in Meetings	3.020	0.682	1	4	2.020	0.495	1	3
Support for the Verdicts	3.150	0.623	1	4	2.523	0.600	1	4
Disputes Solution through Informal Justice System	2.698	0.626	1	4	1.883	0.570	1	4
Effectiveness of Informal Justice System	2.718	0.631	1	4	1.885	0.581	1	4
Implementation and Sustainability of the Verdicts	2.825	0.613	1	4	2.185	0.614	1	4
Overall Structure of Informal Justice System	2.982	0.408	2	4	2.244	0.353	1.333	3.666
Trust on Police	2.340	0.633	1	4	3.068	0.787	1	4
Trust on other Law Enforcement Agencies	2.570	0.729	1	4	3.058	0.707	1	4
Trust on Judicial System	2.230	0.673	1	4	2.983	0.737	1	4
Overall Trust on Ordered Institutions	2.381	0.519	1.333	4	3.035	0.622	1.666	4
	Swat (2018)				**Buner (2018)**			
Trust on Informal Justice System	3.298	0.566	2	4	2.888	0.524	1	4
Participation in Meetings	2.780	0.665	1	4	1.968	0.449	1	3
Support for the Verdicts	2.788	0.673	1	4	2.339	0.579	1	4
Disputes Solution through Informal Justice System	2.470	0.608	1	4	1.848	0.533	1	4
Effectiveness of Informal Justice System	2.490	0.609	1	4	1.848	0.542	1	4
Implementation and Sustainability of the Verdicts	2.540	0.624	1	4	2.888	0.524	1	4
Overall Structure of Informal Justice System	2.728	0.424	1.5	4	2.168	0.350	1.167	3.667
Trust on Police	2.842	0.631	1	4	3.247	0.649	2	4
Trust on other Law Enforcement Agencies	2.641	0.613	1	4	3.172	0.737	1	4
Trust on Judicial System	2.602	0.611	1	4	3.190	0.677	1	4
Overall Trust on Ordered Institutions	2.693	0.463	1.667	4	3.203	0.561	1.667	4

Note: Authors' Own Calculations. The Total Number of Observation are 400 for each District.

words, the overall trust on ordered institutions in Swat remained low in district Swat (2.381) than Buner (3.035).

The descriptive statistics of the variables related to informal justice system and trust on ordered institutions depict the same trend even nine years later of conflict. The average trust, participation, and support for the verdicts of informal justice system remained high in district Swat (3.298, 2.870, 2.788) than district Buner (2.888, 1.968, 2.339), respectively. Similarly, the average disputes resolution though informal mechanism, its verdict effectiveness, and implementation and sustainability remained high in district Swat (2.470, 2.490, 2.540) than district Buner (1.848, 1.848, 2.888), respectively. With these average values overall structure of informal justice mechanism appeared more effective in Swat (2.728) than Buner (2.168).

Additionally, the earlier trend of trust on ordered institutions prevailed over the time. For instance, the statistics suggest that average trust on police, other law enforcement agencies, and judicial system remained lower in district Swat (2.842, 2.641, 2.602) as compared to district Buner (3.247, 3.172,3.190), respectively. In other words, the overall trust on ordered institutions in Swat remained low in district Swat (2.693) than Buner (3.203).

3.4. Methodology

In this chapter, we also apply the OLS and SRDD estimation methods to examine the effect of conflict on informal justice system and trust on ordered institutions. We estimate the following model through the OLS.

$$Y_{1i} = \beta_o + \beta_1 D_{1i} + \theta^{\tau} \sum Z_i + U_{1i} \qquad (1)$$

$$Y_{2i} = \delta_o + \delta_1 D_{2i} + \theta^{\tau} \sum Z_i + U_{2i} \qquad (2)$$

In the above model 1 and 2, Y_{1i} and Y_{2i} depict the structure of informal justice system and trust on ordered institutions, respectively. D_i is the dummy variable, which takes the value of 1 for the households in conflict zone and 0 otherwise. The associated

coefficients to D_i, β_1 and δ_1 capture the intensity of change in structure of informal justice system and trust on ordered institutions as a results of conflict shock, respectively. Z_i is the set of control variables of households, which includes the economic controls, demographic controls, localities of households, and religiosity level. Whereas, U_i is the error term. We estimate model 1 and 2 for each of the underlined objectives for the year 2010 and 2018.

Additionally, to capture the heterogeneous impacts of conflict shock, we rely on the SRDD estimation. We estimate the following models for the treated and control groups, respectively.

$$Y_{1t} = \alpha_t + \beta_t (X - b) + \varepsilon_t \qquad (3)$$

$$Y_{1c} = \alpha_c + \beta_c (X - b) + \varepsilon_c \qquad (4)$$

In the above models, Y is the set of informal justice system in the two districts. Where, α_t and α_c are the intercepts of the models in the treated and control districts, respectively. b is the border line, while $(X - b)$ is the distance from the border line to districts. By estimating the above models, the impact of conflict on informal justice mechanism can be computed through the difference between the intercepts α_t and α_c of the two models. However, for simplicity, we use the following pooled version.

$$Y = \alpha_0 + \tau D + (\beta_t - \beta_c)(X - b) + (\beta_t - \beta_c) D (X - b) + \theta^\tau \sum Z_i + \varepsilon \qquad (5)$$

Our parameter of interest is τ, which shows the average treatment effect on the treated district, and can be interpreted as the jump between the two regression lines on the border. Y is the set of informal justice system, and Z_i is the set of control variables in our regression as discussed earlier.

Additionally, following the same approach, we derive the pooled version of SRDD in equation (8), which represents trust of inhabitants on ordered institutions after a conflict shock.

$$Y_{2t} = \vartheta_t + \delta_t (X - b) + \varepsilon_{1t} \quad (6)$$

$$Y_{2c} = \vartheta_c + \delta_c (X - b) + \varepsilon_{2c} \quad (7)$$

Y is the trust on ordered institutions. Where, ϑ_t and ϑ_c are the intercepts of the models in the treated and control districts, respectively. However, we use the pooled version of model (3) and (4) which is of the following form.

$$Y_2 = \gamma_0 + \rho D + (\delta_t - \delta_c)(X - b) + (\delta_t - \delta_c) D (X - b) + Z_i + \varepsilon \quad (8)$$

Y_2 is the trust in ordered institutions. Our parameter of interest is ρ, which shows the average treatment effect on the treated district, and can be interpreted as the jump between the two regression lines on the border and Z_i is the set of control variables in our regression as discussed earlier.

3.5. Estimation Results

This section provides the empirical findings of the study. The section 3.5.1 exhibits the impact of conflict on the structure of informal justice system. Similarly, the section 3.5.2 examines the impact of conflict on the level of trust on ordered institutions.

3.5.1. Conflict and Informal Justice System

The following tables 3.6 and 3.7 depict the OLS and SRDD estimates of conflict shock on the structure of informal justice system, respectively. The panel A and B in both the tables depict the 2010 and 2018 estimates, respectively. The coefficients associated to conflict in all the specifications of both the tables appear positive and significant, which suggest that conflict shock strengthened the informal justice system. Alternatively, in post-conflict life, the inhabitants assigned higher weights to informal justice system and considered it a more efficient mechanism of personal and communal disputes resolution. The OLS estimates in panel A predicts that conflict shock improved or raised the effectiveness of informal justice mechanism on average by 0.740 percent points as compared to the control region. Whereas, the region dummy appears insignificant in the model which indicates that there prevailed no difference in the

Table 3. 2: Informal Justice System (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	0.739***	0.738***	0.739***	0.740***	0.559***	0.561***	0.562***	0.561***
	(0.027)	(0.027)	(0.028)	(0.027)	(0.028)	(0.028)	(0.028)	(0.028)
Region Dummy	-0.016	-0.019	-0.021	-0.021	0.009	0.008	0.006	0.007
	(0.027)	(0.027)	(0.027)	(0.027)	(0.028)	(0.028)	(0.028)	(0.028)
Constant	2.251***	2.271***	2.200***	2.256***	2.164***	2.991***	3.038***	3.063***
	(0.021)	(0.249)	(0.264)	(0.274)	(0.021)	(0.380)	(0.396)	(0.397)
Observations	800	800	800	800	801	801	801	801
R-squared	0.483	0.486	0.489	0.490	0.342	0.346	0.349	0.349
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. 3: Informal Justice System (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	0.193***	0.261***	0.170***	0.155***	0.206***	0.122***
	(0.011)	(0.017)	(0.009)	(0.011)	(0.017)	(0.009)
Border Distance	0.002	0.034***	-0.005***	0.007***	0.041***	-0.002
	(0.002)	(0.006)	(0.002)	(0.002)	(0.006)	(0.002)
Constant	2.647***	-0.278	2.088***	2.914***	0.501	2.796***
	(0.363)	(0.694)	(0.433)	(0.547)	(1.073)	(0.559)
Observations	348	165	287	348	165	288
R-squared	0.523	0.699	0.590	0.391	0.587	0.435
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

informal justice system of the urban and rural regions. To put it different, the level of informal justice system equally elevated across the urban and rural regions. Additionally, over the time, the informal justice system remained a reasonable and vital mechanism of disputes resolution for the inhabitants that exposed to conflict shock. For instance, the OLS estimate in panel B predicts that the effectiveness of informal justice system remained high on average by 0.561 percent points in conflict affected district as compared to the control district.

The above finding is supported by the earlier studies such as Thorne (2005), Röder (2012), Allen and Macdonald (2013), and Wojkowska (2006). The transition in the structure of informal justice system is supported by the view that during conflict the formal sanctioning mechanism which ensure the law and order situation collapse. Consequently, the society needs some endogenous mechanism that maintain the social order and ensure their physical security. For this purpose, the informal justice mechanism substitutes the formal system to resolve the disputes of the inhabitants, maintain social order, and create better legal certainty. Additionally, the post-conflict period is assumed a period of uncertainty and transition. In such setting, the warring parties' motives and strategies are unknown. Whereas, the promises of formal state institutions become unreliable and difficult to comprehend (De Juan & Pierskalla, 2016). Consequently, such a situation adversely affects the individuals' expectations about state institutions (Grosjean, 2014). Thus, the inhabitants form new or alter the existing institutions that are based on their social norms to solve personal and social disputes (Thorne, 2005).

OLS estimates provide combine treatment effect and ignores the heterogeneous impacts of conflict shock. Certainly, different individuals expose to conflict with different intensity, and thus their informal justice system possibly evolve differently.

The SRDD estimates confirm the heterogeneous impact of conflict shock. The panel A estimates suggest that immediately after conflict informal justice system relative more strengthened in the area that highly exposed to the conflict (0.261), then the moderately (0.193) and least affected area (0.170). Interestingly, similar trends continued over time. After nine years of conflict, the informal justice system remained comparatively more effective in the area that highly exposed to the conflict (0.206), as compared to the moderately (0.115) and least affected area (0.122). The discussion suggests that the occurrence of conflict leads to a social transformation, where the informal justice system retains more importance in the post-conflict life.

Driven from the above discussion, the conflict shock strengthens informal justice system. However, we need to explore the channel which stimulates the society to proceed to informal conflict resolution mechanism. We consider that such transition happens because of the fall in the level of trust on ordered institutions in post-conflict life. The ordered institutions such as judicial system, police, and other law enforcement agencies are considered the main pillars to maintain social order in a society. However, the fall in trust on such institutions might have far-reaching effects on social life of the inhabitants in conflict zone.

The following tables 3.8 and 3.9 depict the OLS and SRDD estimates of conflict on trust on ordered institutions, respectively. The panel A and B in both the tables depict the 2010 and 2018 estimates, respectively. The findings suggest that conflict impaired the level of trust on ordered institutions. The OLS estimate in panel A suggests that immediately after conflict, the level of trust of the inhabitants on ordered institutions decreased on average by 0.665 percent points as compared to the control group. Whereas, the region dummy appears insignificant, which suggests that there prevailed no difference in the level of trust on ordered institutions of the urban and rural

Table 3. 4: Trust on Ordered Institutions (OLS)

	Panel (A)				Panel (B)			
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model4)**
Conflict	-0.657***	-0.658***	-0.666***	-0.665***	-0.513***	-0.513***	-0.512***	-0.512***
	(0.040)	(0.041)	(0.041)	(0.041)	(0.036)	(0.036)	(0.037)	(0.037)
Region Dummy	0.029	0.028	0.039	0.039	0.039	0.040	0.045	0.045
	(0.041)	(0.041)	(0.042)	(0.042)	(0.037)	(0.037)	(0.037)	(0.037)
Constant	3.024***	2.802***	2.613***	2.644***	3.187***	2.928***	3.131***	3.149***
	(0.035)	(0.376)	(0.387)	(0.399)	(0.032)	(0.518)	(0.540)	(0.545)
Observations	800	800	800	800	801	801	801	801
R-squared	0.247	0.249	0.263	0.263	0.199	0.199	0.207	0.207
Economic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	No	No	Yes	Yes
Religious Controls	No	No	No	Yes	No	No	No	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. 5: Trust on Ordered Institutions (SRDD)

	Panel (A)			Panel (B)		
	Bandwidth			Bandwidth		
	[10-44km]	**[45-60km]**	**[61-93km]**	**[10-44km]**	**[45-60km]**	**[61-93km]**
Variables	**(Model 1)**	**(Model 2)**	**(Model 3)**	**(Model 1)**	**(Model 2)**	**(Model 3)**
Conflict	-0.161***	-0.247***	-0.146***	-0.136***	-0.189***	-0.102***
	(0.018)	(0.021)	(0.016)	(0.016)	(0.018)	(0.015)
Border Distance	-0.013***	-0.025***	0.007**	-0.015***	-0.019***	0.007***
	(0.004)	(0.008)	(0.003)	(0.003)	(0.007)	(0.003)
Constant	3.199***	2.802***	3.194***	3.539***	4.758***	3.038***
	(0.566)	(0.943)	(0.744)	(0.758)	(1.295)	(0.936)
Observations	348	165	287	348	165	288
R-squared	0.269	0.536	0.272	0.255	0.434	0.191
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

individuals, i.e. trust equally lowered on the ordered institutions in the urban and rural regions. Nevertheless, nine years later of conflict, there happened some improvement in the level of trust on ordered institutions. Yet, the estimate in panel B predicts that the average level of trust of conflict-affected individuals remained lower on average by 0.512 points. Whereas, like the aforementioned findings the same lower trust prevailed in the urban and rural regions.

The above findings are compatible to study of Mummolo (2018), which also documented that higher militarization of the region erodes trust on the law enforcement agencies. The fall on trust on ordered institutions happens because the inhabitants consider that they (ordered institutions) are unable to uphold the monopoly of violence and maintain social disorder. Additionally, in the conflict zone the inhabitants face heavy economic and physical loss due to counter-insurgency measures of state institutions. Additionally, in conflict, the state agents commit massive human rights abuse as a means to enforce local support, extract information or deter support of rebel movements (Kalyvas, 2006). All such exposure thus reduces inhabitants trust on ordered institutions.

Additionally, to capture the heterogeneous impact of conflict, we rely on SRDD estimates. Certainly, different individuals reside in different parts of the district expose differently to a conflict shock, thus their level of trust on ordered institutions might evolve differently. The estimates in Panel A suggests that individuals that remained highly exposed to the conflict exhibited comparatively high negative trust on the ordered institutions (-0.247), as compared to moderately (-0.161) and least affected (-0.146) regions' individuals. A similar trend is observed in panel B, which suggests that after nine years of termination of conflict, the highly exposed people to the conflict

exhibited lower trust on the ordered institutions (-0.189), as compared to the moderately (-0.136), and least affected (-0.102) regions' individuals.

It is well understood from the discussion that post-conflict life is associated with higher valuation of informal justice system. However, such transition is observed in direct association with trust on ordered institutions. For instance, soon after the termination of conflict, the informal justice system retained higher importance, whereas in the same period, the conflict affected individuals' depicted lower average trust on ordered institutions. However, the role of informal justice system reduced as the level of trust of conflict exposed individuals' improved on the ordered institutions. The same discussion is applicable to the SRDD findings.

3.6. Conclusion

The purpose of this study was to investigate how the conflict shock alter the structure of justice mechanism that occurred in the district Swat of Khyber Pakhtunkhwa (KP), Pakistan. To inquire the causal links, this study identified district Buner – a neighboring district as a control group. The prolonge historical experience of both the districts allowed us to identify district Buner as a control group. We collected a primary data from 400 households on informal justice system in each district and applied the Ordinary Least Square (OLS) and Spatial Regression Discontinuity Design (SRDD) estimation techniques. The OLS findings suggested that the occurrence of conflict shock strengthened the informal justice system. Where the potential mechanism for this transformation observed a fall in the level of trust on ordered institutions. Additionally, the SRDD findings exhibited that the informal justice system strengthened relatively in the area that highly exposed to conflict as compared to moderately and least affected areas.

Transition towards informal justice system in post-conflict life is viewed an

optimal choice. In the absence of formal sanctioning mechanism, such endogenous system facilitates the inhabitants to solve their disputes and maintain social order. However, such social transition is associated with the fall in trust on ordered institutions. Thus, the public authorities should form comprehensive policies in conflict affected regions that help to rebuild the trust on ordered institutions to create incentives for the inhabitants to adopt formal mechanisms of conflict resolution. Additionally, the government can formalize the informal justice system to incentivize the inhabitants to stay on their informal mechanism of justice, with high trust on state institutions.

References

Acemoglu, D., & Robinson, J. A. (2013). Why Nations fail-the origins of power, prosperity and poverty. ld Econo, 2, 118-121.

Adams, J., & Neale, W. C. (1997). Institutions, transactions, and rationality: Evidence from Indian village studies. South Asia: Journal of South Asian Studies, 20(2), 139-156.

Allen, T., & Macdonald, A. (2013). Post-conflict traditional justice: a critical overview.

Arjona, A. (2014). Wartime Institutions A Research Agenda. Journal of Conflict Resolution, 58(8), 1360-1389.

Arjona, A. (2010). "Social Order in Civil War." PhD diss. Yale University, New Haven, CT.

Aron, J. (2003). Building institutions in post-conflict African economies. Journal of International Development, 15(4), 471-485.

Balcells, L. (2012). The consequences of victimization on political identities: Evidence from Spain. Politics & Society, 40(3), 311-347.

Bateson, R. (2012). Crime victimization and political participation. American Political Science Review, 106(3), 570-587.

Bauer, M., Blattman, C., Chytilová, J., Henrich, J., Miguel, E., & Mitts, T. (2016). Can war foster cooperation?. Journal of Economic Perspectives, 30(3), 249-74.

Bircan, C,. Brück, T., & Vothknecht, M. (2017). Violent conflict and inequality. Oxford Development Studies, 45(2), 125-144.

Blattman, C. (2009). From violence to voting: War and political participation in Uganda. American political Science review, 103(2), 231-247.

Capp, M. (2018). Developing a Conceptual Measurement Framework for Measuring Access to Justice in Post-Conflict Settings (Doctoral dissertation, Royal Roads University (Canada)).

Chirayath, L., Sage, C., & Woolcock, M. (2005). Customary law and policy reform: Engaging with the plurality of justice systems.

Collier, P. (1999). On the economic consequences of civil war. Oxford economic papers, 51(1), 168-183.

Czaika, M., & Kis-Katos, K. (2009). Civil conflict and displacement: village-level determinants of forced migration in Aceh. Journal of Peace Research, 46(3), 399-418.

Danish Ministry of Foreign Affairs (2010), "Informal Justice Systems, How to Note".

De Luca, G., & Verpoorten, M. (2011). From vice to virtue? Civil war and social capital in Uganda (No. 298). LICOS Discussion Paper.

Dempsey, J., & Coburn, N. (2010). Informal Dispute Resolution in Afghanistan. US Institute for Peace, Special Report of, 9.

Engel, S., & Ibáñez, A. M. (2007). Displacement due to violence in Colombia: A household-level analysis. Economic Development and Cultural Change, 55(2), 335-365.

Faundez, J. (2003). Non-State Justice Systems in Latin America. Case Studies: Peru and Colombia. In workshop held at the Overseas Development Institute on (pp. 6-7).

Faundez, J. (2006). Should Justice Reform Projects Take Non-State Justice Systems Seriously? Perspectives from Latin America. The World Bank Legal Review, 2, 113-139.

Gáfaro, M., Ibáñez, A. M., & Justino, P. (2014). Local Institutions and Armed Group Presence in Colombia (No. 178). Households in Conflict Network.

Gambetta, D. (1996). The Sicilian Mafia: the business of private protection. Harvard University Press.

Gutiérrez Sanín, F., & Barón, M. (2005). Re-stating the state: Paramilitary territorial control and political order in Colombia (1978-2004).

Hodgson, G. M. (2006), 'What are Institutions?'. Journal of Economic Issues, 40: 1–25.

Helmke, G., & Levitsky, S. (2004). Informal institutions and comparative politics: A research agenda. Perspectives on politics, 2(04), 725-740.

Isser, D., Lubkemann, S. C., Saah Charles, N. T., Addison, A., Ndebe, J., Saye, G., & Sandefur, J. (2009). Looking for justice: Liberian experiences with and perceptions of local justice options. US Institute of Peace.

Justino, P. (2009). Poverty and violent conflict: A micro-level perspective on the causes and duration of warfare. Journal of Peace Research, 46(3), 315-333.

Justino, P., Leone, M., & Salardi, P. (2013). Short-and long-term impact of violence on education: The case of Timor Leste. The World Bank Economic Review, 28(2), 320-353.

Kalyvas, S. N. (2006). The logic of violence in civil war. Cambridge University Press.

Kalyvas, S. N., Shapiro, I., & Masoud, T. E. (Eds.). (2008). Order, conflict, and violence (p. 397). Cambridge: Cambridge University Press.

Kalyvas, S. N., & Kocher, M. A. (2007). Ethnic cleavages and irregular war: Iraq and Vietnam. Politics & Society, 35(2), 183-223.

Kerrigan, F., McKay, A. L., Kristiansen, A., Kyed, H., Dahl, L., Dalton, P., & Vehils, M. (2012). Informal Justice Systems: Charting a Course for Human Rights-Based Engagement.

Kaplan, O. R. (2010). Civilian Autonomy in Civil War (Doctoral dissertation, Stanford University).

Leon, G. (2012). Civil conflict and human capital accumulation the long-term effects of political violence in perú. Journal of Human Resources, 47(4), 991-1022.

Melander, E., Pettersson, T., & Themnér, L. (2016). Organized violence, 1989–2015. Journal of Peace Research, 53(5), 727-742.

North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge university press.

Olsson, O. (1999). A microeconomic analysis of institutions. Goteborg University Working Papers in Economics, (25).

Ostrom, E. (2015). Governing the commons. Cambridge university press.

Parkinson, S. E. (2013). Organizing rebellion: Rethinking high-risk mobilization and social networks in war. American Political Science Review, 107(3), 418-432.

Petersen, R. D. (2001). Resistance and rebellion: lessons from Eastern Europe. Cambridge University Press.

Philip, C. (2010). The Gacaca courts, post-genocide justice and reconciliation in Rwanda: justice without lawyers, Cambridge: Cambridge University Press.

Philip, C. (2009) 'Book Review: Traditional Justice and Reconciliation after Violent Conflict: Learning from African Experiences ed: Luc Huyse and Mark Salter, International IDEA, February 2008' International Journal of Transitional Justice Vol 1:6

Primoratz, I. (2005, March). Civilian immunity in war. In The Philosophical Forum (Vol. 36, No. 1, pp. 41-58). Blackwell Publishing Ltd.

Riley, D. (2005). Civic associations and authoritarian regimes in interwar Europe: Italy and Spain in comparative perspective. American Sociological Review, 70(2), 288-310.

Ricken, J. (2013). The Rule of Law and Informal Justice Systems: A Potential Conflict in Judicial Development.

Röder, T. J. (2012). Informal justice systems: challenges and perspectives. Innovations in Rule of Law, 58.

Sivakumaran, S. (2009). . Identifying An Armed Conflict Not Of An International Character. In The Emerging Practice of the International Criminal Court (pp. 361-380). Brill Nijhoff.

Skarbek, D. (2011). Governance and prison gangs. American Political Science Review, 105(4), 702-716.

Skocpol, T. (1992). Protecting soldiers and mothers (Vol. 992). Cambridge, MA: Harvard University Press.

Staub, E. (2012). Genocide, mass killing, and violent conflict: Prevention and reconciliation. In The Oxford handbook of intergroup conflict.

Thorne, K. (2005). Rule of Law through imperfect bodies? The informal justice systems of Burundi and Somalia.

Tobin, B. M. (2011). Why Customary Law Matters: The Role of Customary Law in the Protection of Indigenous Peoples' Human Rights (Doctoral dissertation).

Vel, J. A. (2011). Policy research on Access to Justice in Indonesia: A review of World Bank and UNDP reports. Law, Social Justice & Global Development (An Electronic Law Journal).

Voigt, S. (2013). How (not) to measure institutions. Journal of Institutional Economics, 9(1), 1-26.

Voors, M. J., Nillesen, E. E., Verwimp, P., Bulte, E. H., Lensink, R., & Van Soest, D. P. (2012). Violent conflict and behavior: a field experiment in Burundi. American Economic Review, 102(2), 941-64.

Wickham-Crowley, T. P. (1992). Guerrillas and revolution in Latin America: A comparative study of insurgents and regimes since 1956. Princeton University Press.

Wojkowska, E. (2006). Doing justice: How informal justice systems can contribute. United Nations Development Program. Oslo Governance Centre.

Wourji, T. W. (2012). Coexistence between the Formal and Informal Justice Systems in Ethiopia: Challenges and Prospects. African Journal of Legal Studies, 5(3), 269-293.

Wood, R. M. (2010). Rebel capability and strategic violence against civilians. Journal of Peace Research, 47(5), 601-614.

Questionnaire

Assalam-o-Alaikum! I am Muhsin Ali, PhD Economics student at the Pakistan Institute of Development Economics (PIDE), Islamabad. I am conducting my PhD research work on the "Violent Conflict and Informal Institutions" for which I need the following information. I shall be grateful to you if you spare some of your precious time to fill the questionnaire. Remember that all of your provided information shall be kept confidential, and will only be used for research purposes.

S.No_____ Name of District _____

I. General Information about the respondents:

1. Name _____
2. Age (years) _____
3. Education (years) _____
4. Marital Status
   (a) Married (b) Single
5. Employed
   (a) Yes (b) No
6. Household Size _____
7. Income of the household_____

(A). First Essay

II. Institutional Information:

A. Within-Group and Out-Group Trust

How much do you trust each of the following types of people? [Read out options]

	Not at all	Just a little	I trust them somewhat	I trust them a lot	Don't know [DNR]
Your Family	1	2	3	4	7
Your Relatives	1	2	3	4	7
Your Neighbors	1	2	3	4	7
Other People You Know from Your Area	1	2	3	4	7
Community Leaders	1	2	3	4	7
Strange People from own area	1	2	3	4	7
Strange People from outside area	1	2	3	4	7

B. Trust on Government and Non-Government Organizations

How much do you trust each of the following organization? [Read out options]					
	Not at all	Just a little	I trust them somewhat	I trust them a lot	Don't know [DNR]
The National Government	1	2	3	4	7
The Provincial Government	1	2	3	4	7
The Local Government/Administration	1	2	3	4	7
The Judicial System	1	2	3	4	7
The Police	1	2	3	4	7
The Other Law Enforcement Agencies	1	2	3	4	7
The Health related NGOs	1	2	3	4	7
The Educational NGOs	1	2	3	4	7

C. Social Participation

In the last 12 months, how much you participated in each of the following social organizations? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
Community Association	1	2	3	4	7
Work-Related/Trade Union	1	2	3	4	7

Jirgas	1	2	3	4	7
Sports Group/ Youth Organization	1	2	3	4	7
Other [Specify]	1	2	3	4	7

D. Participation in Political Activities

In the last 12 months, how much you participated in the following political activities? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
Discussing Politics	1	2	3	4	7
Taking Part in Political Meetings	1	2	3	4	7
Taking Part in Political Demonstrations	1	2	3	4	7
Listening to Political Debates	1	2	3	4	7
Volunteering for a Political Party	1	2	3	4	7
Providing Financial Support to a Party	1	2	3	4	7
Did you vote in the last Election?	Yes	No			
	1	0			

E. Participation in Government and Non-Government Organizations

In the last 12 months, how much you participated in the meetings of the following organizations? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
The Local Civil Administration	1	2	3	4	7
The Police	1	2	3	4	7
The Other Law Enforcement Agencies	1	2	3	4	7
The Health NGOs	1	2	3	4	7
The Education NGOs	1	2	3	4	7
Other [Specify]	1	2	3	4	7

F. Within-Group Cooperation

In the last 12 months, did you receive any economic support, social support or assistance in helping you know or do things from each of the following people? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
Your Family	1	2	3	4	7
Your Relatives	1	2	3	4	7
Your Neighbors	1	2	3	4	7
Community Leaders	1	2	3	4	7
Other People You Know from Your Area	1	2	3	4	7
Other [Specify]	1	2	3	4	7

G. Collective Problem Solution

In the last 12 months, to solve any common problem, did you follow the manifest guidelines decided in meetings of each of the following social organizations? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
Community Association	1	2	3	4	7
Work-Related/Trade Union	1	2	3	4	7
Jirgas	1	2	3	4	7
Sports Group/Youth Organization	1	2	3	4	7
Other [Specify]	1	2	3	4	7

H. Cooperation With Government Organizations

In the last 12 months, did you provide logistic support to the local government/local administration in implementation of any public program in your area? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]

	1	2	3	4	7
In the last 12 months, how often you propagated the policies of these organizations in your area? [Read out options].					
	1	2	3	4	7
In the last 12 months, how often these organizations' policies got mass acceptance? [Read out options].					
	1	2	3	4	7

I. Cooperation with Non-Government Organization

In the last 12 months, did you provide logistic support to the non-government organizations working in your area? [Read out options].					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
	1	2	3	4	7
In the last 12 months, did you motivate the people or introduce the role of these organizations in society development? [Read out options].					
	1	2	3	4	7
In the last 12 months, did these organizations work without any social pressure in your area? [Read out options].					
	1	2	3	4	7

(B) Second Essay

A. Fundamental Rituals

In the times of adversity, how often you ask for help (Dua) from God? [Read out options].				
Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
1	2	3	4	7
How often you try to follow the holy Saying (Hadiths) of Prophet (PBUH) in your daily life? [Read out options].				
1	2	3	4	7
How regular you offer the prayers? [Read out options].				
Once a day	Twice a day	Three times a day	Four times a day	Five times a day
1	2	3	4	5
Are you eligible of giving the Zakah? [Read out options].				
No	Yes	Don't know [DNR]	-	-
0	1	7		
In the last 12 months, did you pay the Zakah? [Read out options].				
0	1	7	-	-
Are you eligible for performing the Hajj?				
0	1	7	-	-
Did you apply for hajj or performed hajj in last few years? [Read out options].				
0	1	7	-	-
Are you physically fit to keep the fasting of Ramadan?				
0	1	7	-	-
How often you kept the fasting of Ramadan?				
1 - 10	11-20	21-25	26 - 30	
1	2	3	4	

B. Religious Humanistic Moralities

In the times of Adversities, how often you extend your financial/social support to the following types of people? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
A. Family Members	1	2	3	4	7
B. Your Relative	1	2	3	4	7
C. Your Neighbors	1	2	3	4	7
D. Strange people	1	2	3	4	7
How often you support financially/socially the poor section of a society? [Read out options].					
	1	2	3	4	7
How often you tolerate different contradictory views in a society? [Read out options].					
	1	2	3	4	7
How often you try to point out the injustice/wrongdoing in a society? [Read out options].					
	1	2	3	4	7
How often you involve in a community wellbeing services? [Read out options].					
	1	2	3	4	7
How often you observe moral/social ethics? [Read out options].					
	1	2	3	4	7

C. Trust on Religious Seminaries

How often you trust each of the following types of religious educational institutions? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
Private rudimentary schools of theology	1	2	3	4	7
Private higher schools of theology	1	2	3	4	7
Public schools of theology	1	2	3	4	7
Others	1	2	3	4	7

D. Trust on Religious Figures

How often you trust each of the following types of religious figures? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
Clerics	1	2	3	4	7
Spiritual healers	1	2	3	4	7
Saint Families					
Others	1	2	3	4	7

E. Trust on Welfare Religious Organizations

Are the following types of welfare organizations work in your area? [Read out options].							
Al-Khidmat foundation		Ummah welfare trust		Others		Don't know [DNR]	
Yes	No	Yes	No	Yes	No	-	
1	0	1	0	1	0	7	

How often you trust each of the following types of organizations? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
Al-Khidmat foundation	1	2	3	4	7
Ummah welfare trust	1	2	3	4	7
Others	1	2	3	4	7

F. Trust on Non-welfare Religious Organization

Are the following types of religious organizations work/exist in your area? [Read out options].								
Tableeghi jamat		Tanzeem-e-islami		Dawati-e-islami		Others		Don't know [DNR]
Yes	No	Yes	No	Yes	No	Yes	No	-
1	0	1	0	1	0	1	0	7

How often you trust each of the following types of organizations? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
Tableeghi jamat	1	2	3	4	7
Tanzeem-e-islami	1	2	3	4	7

Dawati-e-islami	1	2	3	4	7
Others	1	2	3	4	7

G. Participation in Religious Gatherings

How often you participate in the following types of religious gathering? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
A. Funeral prayers	1	2	3	4	7
B. Condolence	1	2	3	4	7
C. Collective prayers in times of adversities	1	2	3	4	7
D. Quranic recitation gathering	1	2	3	4	7

H. Participation in Welfare Religious Organizations

Are you the member of any of the following types of religious welfare organizations? [Read out options].							
Al-Khidmat foundation		Ummah welfare trust		Others		Don't know [DNR]	
Yes	No	Yes	No	Yes	No	-	
1	0	1	0	1	0	7	
In the last 12 months, how often you participated in their various welfare programs at the country level? [Read out options].							
		Not at all		Just a little		somewhat	a lot	Don't know [DNR]
		1		2		3	4	7
In the last 12 months, how often you participate in their various welfare programs at the village level? [Read out options].							
		1		2		3	4	7

I. Participation in Religious Organizations

Are you the member of any of the following types of religious organizations? [Read out options].								
Tableeghi jamat		Tanzeem-e-islami		Dawati-e-islami		Others		Don't know [DNR]
Yes	No	Yes	No	Yes	No	Yes	No	-
1	0	1	0	1	0	1	0	7

In the last 12 months, how often you participated in their various gathering at the non-local level? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
	1	2	3	4	7
In the last 12 months, how often you participated in their various religious gathering at the local level? [Read out options].					
	1	2	3	4	7

J. Cooperation with Welfare Religious Organizations

In the last 12 months, did you motivate the masses or introduce the importance of any of the welfare religious organizations, mentioned above? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
	1	2	3	4	7
In the last 12 months, did you provide logistic support to welfare religious organizations working in your area? [Read out options].					
	1	2	3	4	7
In the last 12 months, did you provide financial support to welfare religious organizations working in your area? [Read out options].					
	1	2	3	4	7
In the last 12 months, did these organizations work without any social pressure in your area? [Read out options].					
	1	2	3	4	7

K. Cooperation with Non-Welfare Religious Organizations

In the last 12 months, did you motivate the masses or introduce the importance of any of the religious organizations? [Read out options].					
	Not at all	Just a little	somewhat	a lot	Don't know [DNR]
	1	2	3	4	7
In the last 12 months, did you provide logistic support to religious organizations working in your area? [Read out options].					
	1	2	3	4	7
In the last 12 months, did you provide financial support to the religious organizations working in your area? [Read out options].					
	1	2	3	4	7
In the last 12 months, did these organizations work without any social pressure in your area? [Read out options].					
	1	2	3	4	7

C. Third Essay

A. Informal Justice System

How much do you trust in the Jirga system in your area? [Read out options]					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
	1	2	3	4	7
In the last 12 months, how much you participated in Jirga meetings? [Read out options].					
	1	2	3	4	7
How often you prefer to solve your conflicts with others in a society through Jirga? [Read out options]					
	1	2	3	4	7
How long the existing Jirga system in your area is effective in the solution of inter personal conflicts? [Read out options]					
	1	2	3	4	7
How effectively the verdicts of the Jirga is implemented in true sense?					
	1	2	3	4	7

B. Trust on Ordered Institutions

How much do you trust each of the following organization? [Read out options]					
	Not at all	Just a little	Somewhat	A lot	Don't know [DNR]
The police	1	2	3	4	7
The law enforcement Agencies	1	2	3	4	7
The judicial system	1	2	3	4	7