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Introduction

FATA Urban Communities Program (FUCP) is a major step forward toward urbanization of conurbations in the federally administered tribal areas or FATA region of Pakistan. This area has witnessed militancy and violence for the last one decade, interspersed by armed interventions by the state to restore peace. The FUCP is being implemented under the peace-building strategy created after the post crisis needs assessment (PCNA), a multi-donor initiative led by the World Bank in 2010. The program aims to carry out significant improvements in municipal infrastructure, services and governance in 14 urban areas of FATA to provide options for urban living within the tribal areas. It promises a number of direct economic and social benefits, linked with urbanization, for the residents of tribal areas. The slow growth of urban communities in the tribal areas is partly due to absence of well-organized municipal functions in these communities, where large collections of population are yet to receive municipal amenities and to serve as magnets for further urbanization.

The efforts to provide municipal services in tribal areas aim to serve another set of policy objectives. Through noticeable and immediate improvements in municipal services, FUCP strategy aims to create higher levels of satisfaction in the residents. They are creating hubs of high quality municipal services to engender and strengthen citizen trust in state institutions and thereby act toward reduction in militancy and stimulate a return toward normalcy.

The evaluation reported here was carried out to assess the effects of municipal service interventions in Khar, capital of Bajaur Agency, on achieving positive perceptions toward the key policy objectives of changes in citizen perceptions, more specifically the effects of these service delivery initiatives on citizen trust in state institutions and their perceptions of state's work in the tribal areas. The results will guide implementation of the subsequent activities in

Khar and in the remaining 13 locations designated to benefit from implementation of the project.

Implementation Context

The town of Khar is an urbanizing area with a population of 8,164 households. It is the capital of Bajaur Agency, one of the 7 tribal Agencies in north-western Pakistan on the borders with Afghanistan. Like other tribal agencies, Bajaur Agency is mostly rural and has an administrative system without elected local governments. Municipal services have weakened over time or remained under developed due to the militancy that has affected the area for the past decade. There is no elected local government to lead urban development in the area or select project interventions in accordance with citizen choices dictated through voting. The municipal services for provision are grouped under an administrative unit which reports to the political agent appointed under the authority of federal government. The local sources of revenue are miniscule and expenditures are dependent upon grants from FATA Secretariat or from the political administration of the tribal agency.

FUCP was designed and implemented to contribute to recovery and rehabilitation of municipal services in the postcrisis environment. It has started supporting fast paced development of priority infrastructure in the urban area including investments in rehabilitation and reconstruction of service delivery infrastructure, expansion and upgrades of water supply systems and improvements in other municipal services including sanitation, solid waste management, streetlights, drains and roads. The work in Khar started with implementation installing solar powered street lights and tube-wells for improvement of water supply as the first set of activities. These two sets of activities are not only the first ones to be implemented in Khar but also comprise of the pilot implementation of the urban centers improvement plans in all the 14 towns covered under the program. Therefore, it was imperative to carry out evaluation of the effects of these interventions on levels of citizen

trust and to see if the hypothesis of building citizen trust through improvements in urban services holds.

The PCNA led to development of multi-sector approach to development in the region. It has followed strategic objectives (1) to enhance responsiveness and effectiveness of the state to restore citizen trust; (2) stimulation of employment and livelihood opportunities; and (3): ensure delivery of basic services. This strategy sees provision of basic services as a means toward achieving counter-radicalization and reconciliation. These strategic objectives aimed to address the drivers of crisis in the areas and through this mitigation establish durable peace. Development of Khar is being pursued as an instrument of recovery. This has been prioritized to serve as a hub for economic opportunity and create attractive options for urban living in the tribal areas for the tribal population that mostly lives in rural conurbations. The few towns that exist do not offer high quality municipal services. In this sense, development of municipal services in Khar also pursues a developmental agenda where urban centers are developed per se to provide higher levels of services within tribal areas.

Rationale for the Evaluation Approach

Khar is the agency headquarters of Bajaur Agency which has been majorly affected by militancy and violence in the past 10 years. The Post Crisis Needs Assessment carried out in 2009 identified the failure of service delivery as one of the contributory factors to rise of militancy in the area. To begin with, service delivery has not been strong in the tribal areas. The municipal services are mandated in only a small number of towns as the institutional development of local government in the area has received set back due to preoccupation with peace and security. PCNA argued that there was a link between failure of service delivery and militancy and that this link passed through low trust in the state contributing to radicalization. Based on this argument, PCNA led to allocation of project funds to 14 towns in the tribal areas. In this evaluation, therefore, one of the key questions explored was if

investments in municipal services contribute to higher levels of trust in the state. This evaluation question is posited in the context of the relationship between public services, in general, and citizen trust and municipal or urban services and citizen trust, in particular.

Urbanization is taking place at a slow pace in tribal areas of north-western Pakistan. Khar is only one of the few urban centers that are emerging as a small city. Like other small urban areas of Pakistan, municipal services are poor and development remains a challenge (Ghani, 2012). The program prioritized street lights and water supply as first sets of interventions to upgrade services in some neighborhoods while holding them constant in some others. The neighboring town of Inayat Kalay did not receive any investments for service improvement in this time period. The investments were not decided through any electoral process where politics could fathom the support base for the local government. nor was there any voting based prioritization of investments. The project was centrally directed and in fact no elected local government is in place. The placement of streetlights and drinking water interventions was decided on the basis of technical assessments carried out by project staff.[1] No formal process was adopted for consultation with the local population. It can be therefore argued that the placement of street lights and water supply investments is not correlated to prior citizen satisfaction or citizen trust levels.

The FUCP investments in municipal services seek to change perceptions of service delivery through improvements in wellbeing of residents. This plan is created on the notion of existence of such a relationship. The linkage between improvement in public services, perceptions and citizen trust have been studied. Various types of investments in municipal services contribute to wellbeing (Hourie and Bar-El, 2015). This takes place through direct benefits of municipal services and cost savings accruing through reduction of expenditures on private substitutes. Evidence also suggests that improvements in services lead to higher levels

[1] This is to disambiguate from the political determination of investment decision as reported in several studies; for example, see Goeminne, and Smolders (2014).

of citizen satisfaction (Deichmann and Lall, 2003). The FUCP investments are in line with these experiences and possibly were planned to replicate the results. In case of Khar, there was an additional super objective of enhancing citizen trust in state. It has been argued that perceptions of public services, which would be correlated to changes in access and quality of services, lead to satisfaction which in turn contributes to citizen trust (Van Ryzin, 2007).

In case of Khar, the Tiebot type voting with feet is not common due to the tribal communities inhabiting the town. Due to local familial and tribal ties, a large fraction of residents would form a stable part of the population. These ties guarantee security and protection against aggression in an area where tribal customs are the means for resolving disputes. Recourse to formal courts is less common. Tribes and sub-tribes are governed under a concept of vicarious liability where individuals share civil and criminal liabilities for members of their families, extended families and sometimes for their tribe. The choice of residence works within these constraints. Long term residency of this kind means that migration to seek better services alone would not be commonly practiced. In such cases, gauging citizen satisfaction assumes higher importance as it can provide guidance to policy and planning (Ferrari and Manzi, 2014). Limited choices for opting out of jurisdictions mean consumption of services is under some coercion and that there would be higher levels of effects of change in quality of services. Consumption of municipal services in these jurisdictions is under another coercion as well. In the absence of elected local government, the decisions for investment in municipal services are made by central project authorities. This consumption of services as a matter of coercion rather than choice is likely to render their perceptions sensitive to their relationship with the decision makers (Brown, 2007).

Gauging citizen perceptions and their relationship with citizen trust levels is an important inquiry to inform planning decisions as well as general policy working toward peace building in the tribal areas. The data for assessment of services could comprise either

technical measures of performance or stated responses of residents. We use the latter in this evaluation for the reasons explained here. Even in the absence of objective measures of quality of services, citizen satisfaction can be studied using stated responses for planning decisions (Diagne, Ringold, and Zaidi, 2012). Subjective data are important to assessment of services (Shingler et al., 2008) particularly in case of programmatic activities aiming to change perceptions and through them levels of citizen trust. Another reason to rely on citizen satisfaction as a measure of performance is that in addition to its intrinsic value, it may also correlate with administrative performance measures (Kelly and Swindell, 2002a). Stated responses in relation to change in services also form a report on the importance assigned to services. It is very likely that people notice changes in service level acutely when these matter more to them compared with low valued services. Changes in satisfaction indicate the importance of service (Van Ryzin and Immerwahr, 2007). The new street lights and water supply are major improvements in basic services on their baseline levels and their noticeability is therefore expected.

At the same time, for analytical clarity it is important to explore the link between perceptions, levels of satisfaction and citizen trust. It has been observed that perceptions of quality of key urban services affect level of citizen satisfaction and are related to trust in local government (Van Ryzin, et al., 2004). This correlation in itself does not establish causality. Establishing the linkages between government services and levels of citizen trust is not always straightforward (Bouckaert and Van de Walle, 2003). Whereas improvements in urban services may contribute to citizen trust in government, once such trust is established it may also influence formulation of perceptions of public services (Van de Walle and Bouckaert, 2003). In case of Khar, our study provides a unique opportunity of almost greenfield interventions in an urbanizing area. The solar street lights are a first time intervention in Khar. Any correlation between this intervention and citizen satisfaction and

trust will at least be shorn of the reverse causality of trust engendering a perception of higher level of services. However, measures of service performance that are predicated on citizen perceptions of quality of services are very likely to link them with citizen trust (Yang and Holzer, 2006). When citizens report on the services and rate them according to their perceptions, these reported measures will have a linkage with trust. In situations where perceptions change on account of improvement in quality of services, changes in trust could be plausibly linked to changes in perceptions. At a basis level, performance of public services also works as a precondition to citizen trust in government (Vigoda and Yuval, 2003) even though it may not be able to entirely determine the levels of trust.

Higher satisfaction with services also leads to ownership of the state. There is some evidence that satisfaction with public services is correlated with higher pride in being citizens of a state (Mustafa et al., 2014). National pride is another manifestation of trust. Conversely, when quality of services matters to residents, poor quality contributes to negative perception of local government (Moletsane, de Klerk and Bevan-Dye, 2014).

Citizen perceptions are not a linear function of quality of services. Preferences for the type and level of services vary across residents. Political preferences and differences in preference for service types and levels can lead to biased perceptions. In addition to such opinion biases that affect creation of perceptions, the types of services may also be valued differently by different individuals and types of neighborhoods (Licari, McLean, and Rice, 2005). In poorer neighborhoods, basic services may be valued highly; in richer neighborhoods these may be taken for granted but change in amenity services may be valued higher.

Individual attitudes and political views may bias assessment of public services. This is also relevant to the evaluation question in case of Khar's municipal initiatives. Residents of Khar may view different institutions like the office of the Political Agent, FATA

administration and federal government differently. Each of these levels of government stands for a package of services as well as carries historical baggage of previous performance. State is not necessarily seen as a monolith. Individuals distinguish between different levels and institutions of the state and their satisfaction may vary across levels of government (Saich, 2007). In general, views about the role of the state may influence the way they value public sector performance. If they hold a negative view about the public sector as being wasteful, inept, unresponsive or corrupt, their perceptions about public services will be influenced by these prior views (Marvel, 2015). Similarly, normative expectation about the public sector shape levels of satisfaction with public services (Jacobsen, Snyder, and Saultz, 2014). In our study, we control for normative expectations about the role of government. We also separately estimate the effects on views about different levels of government and general performance of different levels of government with regard to their general responsibilities.

It is also plausible that perceptions develop on the basis of available information.[2] They do not necessarily formulate after enjoyment of improvements in services. When new service delivery infrastructure is put in place, at the level of neighborhood, the information is clearly understood to create positive perceptions toward improvement in services. It is also possible that initiation of noticeable work leads to creation of positive perceptions on the basis of expected improvement in services. Using the difference in timing of services delivered and start of investments in improvement provides us the opportunity to explore this question in case of Khar. The street lights had been implemented already at the time of survey. None of the water supply improvement schemes had been completed. So where there was neighborhood level information on the start of work, none of the water supply schemes had provided improvements in water supply by the time of the survey. We used this difference in timing to estimate whether actual improvement or just information on planned

[2] For example, see James and Moseley (2014).

improvement can affect resident perceptions about local government. The expectancy-disconfirmation theory of citizen satisfaction suggests that the difference between expectations and received quality of services would affect citizen levels of satisfaction (Van Ryzin, 2006). Experimental evidence suggests that citizen perceptions are more strongly swayed by dissatisfaction compared with satisfaction (Olsen, 2015). There is evidence that citizen satisfaction is modulated both by improvements in service delivery as well as implicit quality compared with previous expectations (Van Ryzin, 2013). Unlike the expectancy-disconfirmation theory of citizen satisfaction, here the results signify the evidence for experienced improvements as well as expected improvements compared with baseline level of services. This is more in line with the view that subjective perceptions of quality of services are formulated with reference to expectations that result in levels of satisfaction with services (Roch and Poister, 2006).

Citizen satisfaction does not only rise with improvements in public services but it also makes gains with improvement seen as comparison with other groups or neighborhoods (Deichmann and Lall, 2007). Service levels are interpreted in comparison to reference neighborhoods (Zolnik, 2011). The placement of improvements in urban services in Khar affords this opportunity to study this impact where changes in satisfaction level may reflect rising satisfaction from consumption of improved services as well as improvements compared with other neighborhoods. Citizen satisfaction should therefore vary across neighborhoods with levels of service delivery (Kelly and Swindell, 2002b). However, it is possible that the effects are bidirectional: the change in level of services in the recipient neighborhoods may affect citizen level of satisfaction in one way but it may work in the opposite direction on residents where level of service do not change. In our study, it is not possible to rule this out. We also control for differences in satisfaction across gender as it plays a role in shaping perceptions of public services (Mokhlis, 2012).

Methodology

The investment priorities inKhar emerged out of a project led and organized consultation process and resulted in selection of potable water supply schemes, solar street light, street pavement construction and roads construction and rehabilitation. Municipal service delivery infrastructure was built in various neighborhoods of Khar. The placement of 450 solar street lights and location and additional water supply from 7 tube wells was decided using engineering or service delivery criteria. These were not based on any consideration relating to resident's higher interaction with government or their trust in the state institutions. The project authorities were appointed government officials with no local political interest or career stakes in the selection process. They took decisions without considerations for garnering local political support or rewarding such support. Due to this manner of placement of public infrastructure, it is plausible to assume that it is not endogenous.

Exploiting the placement of streetlights and tube wells in some neighborhoods and not in others and complete absence of these new initiatives from the neighboring town of Inayat Kalay, a list of all neighborhoods was created. This list included all neighborhoods of the neighboring town. The total households in these neighborhoods were 8,164 in Khar proper and 716 in Inayat Kalay. A random sample of households was selected from both intervention and non-intervention neighborhoods. A total of 621 individuals were surveyed, including shopkeepers, transporters, students, farmers and one individual from each from the randomly selected households.

A survey questionnaire (Annex.III) was administered in face to face interviews to collect data. The survey was carried out from 24th November to 26th December 2014. The data were recorded on printed forms onsite.

Descriptive Statistics

The total survey sample was 621 respondents across 12 neighborhoods. Out of the neighborhoods included in the survey, 8 received water supply improvements and 9 received solar street lights. One large neighborhood serves as the control where neither service improvement is being implemented. Figure 1 shows that a high percentage of respondents at 76 percent is below 35 years of age. This depicts a representative characteristic of Pakistan's demographics where around 60 percent of the population is less than 29 years of age. A little more than one-fourth of the sample is women (Figure 2). Due to differential use and valuation of services, it is an important representation though achieving a comparable representation was constrained due to tribal customs where access to women is restricted. Three-fourth of the respondents were married (Figure 3).

Nearly half the sample has no education and another 15 percent have up to five years of education (Figure 4). This is in line with the literacy levels in the tribal areas. Around 20 percent are jobless and a high fraction of 15 percent has government jobs (Figure 5). Khar is a Pukhtun city and as expected 99 percent report Pukhtun ethnicity (Figure 6). This is a particular features of tribal areas where indigenous communities are not diverse in terms of ethnicity. Vehicle ownership was used as a proxy for wealth. Almost 90 percent of the respondents report not owning a vehicle (Figure 7). Out of the remaining less than half own a car and the remaining own bicycles and motorcycles. This situation changes for the second measure of wealth, namely, home ownership. One-fourth own a house (Figure 8). The remaining high fraction of the sample may live in shared accommodation as part of combined households. Land ownership was reported by only 3 respondents (Figure 9).

Nearly 35 percent of the respondents depend upon municipal water supply. This indicates that the water supply is an important service in the sample. For the remaining, the dependence on private wells and hand pumps could mean inadequate water shoring up unmet

demand for municipal water. Figure 10 shows that only 19 percent have access to water pumps. Despite concerns for lowering water table and sustainability of this source of water, in the short run they may have less demand for municipal water. Figure 11 shows that less than half of the sample uses some method of water purification. The remaining do not use any measures for water purification. The use of water purification methods could indicate perceptions about water quality.

Citizen Perceptions of Quality of Municipal Services and Institutions

When asked directly about quality of water the responses reveal important information on perceptions (Figure 12). A total of 37 percent rate it as good while the remaining rate it as low. When asked if FATA administration had improved quality of water in the last one year, a total of only 22 percent agreed while the rest disagreed. Figure 13 shows that those who report municipal water to be the primary source for the household have assigned a higher rank to quality of water compared with those depending on private water sources. The average is not very high but is only better than the group depending on water pumps, motor pumps and private wells. For municipal tank it is 62 percent who are satisfied and for municipal piped water it is 48 percent who are satisfied. These percentages compare well with hand pump (20 percent), private motor (18 percent) and private well (28 percent) levels of satisfaction. This indicates that citizen perceptions about quality of water are higher where they are receiving municipal supply compared with private sources of water. Ongoing schemes extending services to meet unmet demand are going to lead to positive changes in citizen perceptions if they are able to maintain or improve the current levels of supply and quality of water. This is an assertion which is tested in this evaluation.

Figure 14 takes this discussion further by cross tabulating the purification methods with perceptions on quality. It shows that those who do not use any method for purification have also assigned the lowest rating of quality of water. On the hand, people using chlorine

tablets and filter rank is comparatively higher. Even after boiling, the water quality for a majority is low. Municipal water and water from private sources is a major issue in Khar and quality remains a major concern. The second panel in Figure 14 shows that in terms of people using any of the methods the level of dissatisfaction with FATA administration's efforts is high and almost 70 percent expressed dissatisfaction with FATA administration's efforts at improvement in quality of water.

Moving on the citizen perceptions of institutions in FATA, Figure 15 shows that a large number, almost 50 percent, did not express a view about the suitability of indirect government versus elected local government in FATA. It indicates equally low support for the known and practiced form of governance as well as the option that has been often discussed. When this question relates to the status of FATA as a politically entity, again more than 50 percent do not favor either keeping it in its current status, making it a province or merging it with the neighboring province (Figure 16). These responses indicate that there is high disaffection for forms of governance and the past low levels of service delivery still hold sway on trust in different forms of governance. This situation changes when a specific option in the form of tribal councils is presented. In Figure 17 it is shown that the option of having tribal councils receives the highest support at 40 percent compared with 11 percent for provincial officials and 6 percent for federal officials. This indicates support for local accountability and political mechanisms for service delivery that are localized.

The evaluation attempts to look at citizen perceptions of municipal services in the context of their perceptions about other public services and government roles. Figure 18 shows the results of three questions presented to the respondents where three dimensions of the role of the political agent were presented, namely, development of FATA, maintaining peace and security and ensuring fair and transparent system of justice. The scores were low on all three counts indicating low citizen trust in all three dimensions of the role of the

political administration. These inquiries are then raised to sectoral level roles and the results are presented in Figure 19. The citizen satisfaction remains low on five sectoral roles, namely, quality of services provided by the political administration, schools, healthcare, system of justice, governance system and large scale infrastructure (role of federal government). This context draws the perceptions of municipal services in sharp relief indicating that any changes in public services are distinguished through acute observation and even if there is no generalized change in public services, citizen perceptions can undergo changes in specific dimensions. The citizen perceptions of service delivery and their trust in levels and institutions of government are domain specific.

In Figure 20, the replies show that the investment in local infrastructure are recognized by a minority whereas three-fourth of the respondents are not satisfied with it. This could be either insufficiency or inappropriate choices for investment. At the same time, when asked about the specific cases in which investments in local infrastructure have been made the responses show that in general there is satisfaction. Figure 21 shows that a majority are satisfied that the investment in streetlights in Khar has improved nighttime visibility. Compared with general low level satisfaction with general public services in the area, as discussed above, the satisfaction with streetlights contributing to security is higher at 43 percent even when it is a view held by a minority. This further substantiates the assertion that general perceptions of government aside, citizen perceptions do correlate to specific cases of service delivery improvements and bring about domain specific changes in perceptions.

The low levels of satisfaction in public services are manifest in a number of dimensions. In Figure 22, the levels of trust are given in various government levels and agencies. These are generally expressed as low. In case of municipality, the trust is very low at about 14 percent. The change in perceptions about municipal services is at a level where it has not transformed into higher levels of trust in the municipality. The levels of trust in other

government institutions are not high as well. On the other hand, the levels of trust in the informal institutions of Jirga and mosque are higher at 63 percent and 50 percent of the respondents respectively expressing trust in these institutions. The situation is indicative of low levels of service delivery and weak role of state in the agency creating space for informal institution of Jirga. These institutions work in different areas of community or public affairs and are not perfect substitutes. At the same time, citizens may be relating to them as how functional they are for whichever purpose they approach these institutions. The municipality is ranked for its work in municipal services and the Jirga in dispute resolution. The other government institutions similarly may be ranked based on their performance in their specific domains. However, Jirga and the local court are substitutes for dispute resolution. In this case, the trust expressed by 63 percent of respondents in the Jirga as against 21 percent in the courts means that alternate dispute resolution offered through Jirga is trusted above the local courts that adjudicate through application of formal laws. The low levels of trust in the formal institutions should also be seen in the context of disruption to services and deterioration in security situation in recent years in the tribal areas. These disruptions in services may still be contributing to low levels of trust.

In the presence of low levels of trust in formal institutions, 44 percent of respondents indicated that they are interested in politics (Figure 23). The majority expressed that they are not interested in politics. This could mean that politics as currently organized in the agency does not offer a mechanism for voicing local concerns or seeking resolution of local issues. Generally, if there are high levels of dissatisfaction with public services, this should manifest as higher interest in politics. In this case, service delivery disaffection perhaps is leading to disavowal from politics (Bennett et al., 2013).

A set of questions was posed to seek general attitudinal attributes of the respondents. Happiness and trust cannot be strictly domain specific. There is a likelihood that happiness in

one dimension of life may affect perceptions in another dimension and vice versa. Figure 24 reports results where respondents expressed general satisfaction with life. A majority of 76 percent expressed satisfaction with their lives in general in sharp contrast to low levels of satisfaction reported for public services. This drops to 43 percent of the respondents expressing satisfaction with financial situation (Figure 25). These inquiries are continued in Figure 26. More respondents are generally satisfied with community, life at home and health but less so with jobs and life in general.

The survey respondents were asked if they feel proud being citizens of Pakistan. This general questions was intended to capture a deeper level of trust in the state and in the context of tribal areas it assumes a high significance. Three-fourth of the respondents expressed that they are proud to be citizens of Pakistan (Figure 27). Seen in the recent context of militancy and violence in the area, disruption of state services and low levels of service delivery, this provides important insights that citizens continue to view the state with high aspirations and hope.

A key factor in case of Khar affecting citizen perceptions of public services could be their exposure to violence. As noted above, Khar has been affected by militancy in the tribal areas. Acts of violence have included bombings at public places and other militancy related incidents. In the sample, 18 percent of respondents report that they have been exposed to violence in the last one year (Figure 28). This response is to the question where they have had a firsthand exposure of the respondent or a family member to violence. In Figure 29, second exposure in the form of hearing an explosion is the basis of the question. A very high percentage of 64 percent report hearing such explosion often. These levels of exposure to violence and militancy related incidents are an important feature of the sample and are to be kept in view while interpreting the results relating to change in perceptions about the municipal investments.

To ascertain whether innate or learned responses like inherent trust in others are affecting the results, we included questions to elicit general attitudes of trust toward others. We used standard questions borrowed from General Social Survey. Figure 30 shows that willingness to trust others or not is almost equally distributed among the respondents with a slight tilt in favor of those willing to trust others. In response to the question whether others would like to take advantage of you or be fair to you, the sample was split between 60 percent who thoughts they felt that others would take advantage of them with the remaining 40 percent saying they would expect others to be fair to them (Figure 31). To the question if most people you come across would try to be helpful or are they looking out for themselves, 60 percent reported that they would come across others being helpful with the remaining expecting others to be looking out for themselves Figure 32).

A related set of three questions found the sample tilted toward higher trust (Figure 33). The questions were 'I like to help others,' 'I trust others,' and 'when dealing with strangers, one is better off using caution before trusting them.' This is an expected result in a tribal society where long term relationships are highly valued and where social norms favor collective goods over individual options. These questions could be bringing out attitudes fashioned over time in a community where sanctions on cheating in a tribal society are high. On the other hand, where the questions relate to trust in situations where open dealings are not there, the responses are not the same. To the next set of three questions, the sample has mostly negative responses as shown in Figure 34. The questions were 'how often benefited from generosity of someone don't know,' 'how often leave house or car unlocked,' and 'how often lend personal possessions other than money.'

Results

The empirical analysis was carried out at two levels to estimate the effects of solar streetlights and water supply improvements on satisfaction with municipal services and trust

in government. For estimating the effects of treatments on perceptions about municipal services, the effects were estimated separately for solar streetlights and water supply, noting that the streetlights had been installed by the time of the survey whereas the work of water supply improvements had yet to be completed.

The models were estimated as OLS and Probit regressions. The effects of installation of solar streetlights were estimated on quality of services provided by political administration. The solar streetlights treatments were depicted as dummy variable or as number of lights installed per household in a neighborhood. The results reported in Table S1 show that the treatment dummy is positive and significant at 1 percent level. The treatment variables are number of solar street lights per household; solar street lights installed in the neighborhood (1 if Yes); drinking water improvements in process of installation (1 if Yes); solar tube wells in process of installation (1 if Yes); conventional tube wells in process of installation (1 if Yes); and rehabilitation tube wells in process of installation (1 if Yes). The effects on 9 variables are estimated. These are, as reported in columns, confidence in the municipality; quality of drinking water; quality of services; confidence in the government of Islamabad; satisfaction with life; proud to be Pakistani; trust in people; satisfaction with life at home and satisfaction with community.

Resident perceptions of the quality of services provided by the political administration and confidence in federal government each has a positive effect from installation of solar streetlights. Similarly, the coefficient on the number of streetlights per household measure is also positive and significant at 1 percent level. The effect rises with the concentration of streetlights in a neighborhood. It is also positive for perceptions of municipality.

The effects were also estimated by including the water supply improvements dummy as the treatment. This is also positive and significant at 1 percent level for quality of drinking water.. The models are re-estimated as probit regressions. The results remain essentially the

same. The marginal effects are reported in Table S3. The magnitudes are important as they show that the changes are nontrivial. For example, the installation of solar street lights enhances the confidence in federal government by about 10 percent. Similarly, the beginning of work on water supply improvements leads to an anticipatory positive perception of improvement in quality of water by about 44 percent.

The control variables provide some interesting insights. The age variables are negative and significant indicating that the effects of streetlight and water supply investments are positive on the younger residents. This is an encouraging sign for counter radicalization objectives of the project. The positive and significant coefficients on self-employed and education indicate that these subsets of population have a higher effect on their perceptions. This provides insights for charting out development communication programs in the area.

The positive effects on the perceptions of quality of services is important. As reported in the tables these effects are positive for commencement of works on water supply improvements. The results of these works are yet to be delivered and therefore the positive changes in perceptions are anticipatory in nature. They indicate that even the start of interventions in the neighborhood has a positive effect on citizen perceptions, lending some evidence to the notion that perceptions are formulated with reference to expectations of change on baseline levels of services.

We estimated OLS and Probit models for determining the factors that influence trust in government. The state is characterized as its different levels and institutions recognized by the people. In the first case, the dependent variable is ‘confidence in municipality’ recoded as a binary variable. The first 5 levels of agreement were coded as 1 and the lower five levels as zero. The model was estimated using two version of the treatment variable placement of treatment in the neighborhood. In the first version, the treatment is included as a dummy variable equals 1 if the respondent’s neighborhood has been given solar streetlights and 0

otherwise. In the second version, the number of streetlights divided by the number of households in the neighborhood is used as a measure of concentration of solar streetlights. The results reported in Table S2 and S3 show that the treatment is positive and statistically significant at 1 percent level. It means that the streetlights contribute to an increase in resident's level of confidence in the municipality. The second version of the treatment is not significant. We used a number of control variables. Out of these owning a vehicle, being a female and single are positive and statistically significant demographic characteristics of the respondents. Interest in politics and direct exposure to violence are negative and significant. The indirect exposure to violence is positive and significant. A general measure of trust in others is negative and significant. General satisfaction with the community in which the respondent lives is positive and significant. These results show that placement of solar streetlights increases trust in the municipality.

We estimate models with confidence in federal government as the dependent variable. In case of Khar, it is important to note that the tribal area is federally administered. This is in line with the federal government as the key arbiter of public services in these federally administered tribal areas. Therefore, the agency level activities are funded by federal government. The streetlight treatment dummies are positive and significant in both forms, namely, as categorical variable indicating the inception of solar streetlights in the neighborhood as well as solar streetlights per household installed in the neighborhood. In case of the solar streetlights as a categorical variable, the coefficient is significant at 5 percent level while it is significant at 1 percent level for numbers per household. Among the control variables, direct exposure to violence is again negative and significant while indirect exposure to violence is positive and significant. The general trust in others is also positive and significant.

The model is then estimated with addition of the drinking water treatment. The results remain essentially the same for the streetlight dummies. The drinking water dummy, which depicts start of work on water supply improvement, is positive and significant when included with the solar streetlight treatment defined as numbers per household but negative when included with solar streetlights treatment as a categorical variable. The rest of the results remain essentially the same. When water supply is the only treatment, it is not significant.

The detailed results are reported in Annex III.

Conclusion

FUCP is an important initiative to bring up the quality of municipal services in the upcoming urban centers in the tribal areas. It aims to provide higher quality municipal services to promote resident wellbeing. While pursuing this aim, the policy context of its implementation is also critical. The results show that the project was well conceived as part of the counter radicalization approach and as an ingredient of peace building efforts in this area which has seen much violence and militancy. These initial results are based on a survey conducted a few months after implementation of first set of investments in improvements in municipal service delivery and just about at the time of start of work on the second set of improvements. The change in citizen perceptions and their effects on trust have resulted from these investments, completion of streetlights improvements and demonstration of credible intention on part of the project on the water supply improvements.

There is evidence that the results are positive on younger cohorts of population. As counter radicalization measures, investments in municipal service has a double advantage. They enhance the residents' wellbeing and also contribute to increase in trust in the state. Investments in municipal service delivery will provide the much needed impetus to development of urban areas in the tribal agencies. It is evident from the survey that the levels of trust in formal institutions have plummeted. This situation is being observed at the end of a

time period of violence, militancy and turbulence and is not very unexpected. This situation does indicate that it can provide breeding ground atmosphere for violence and perhaps lack of resistance to militancy resulting from political disavowal. The results also show that a vast majority of the residents of Khar are proud of their national identity and while exhibiting dissatisfaction with public services and low trust in formal institutions, continue to keep a deeper level trust in the state through preservation of high pride in their national identity. Any alternative options for re-conception of state as on the offer through militancy are therefore not likely to be taken up. The investments in public services are likely to consolidate this support and contribute to peacebuilding.

As post crisis strategy, the evidence suggests that the investments in improving service delivery are working well. These findings are important not only in the sense that they show that FUCP is working toward achieving improvements in wellbeing but also that these are being recognized by the residents resulting in positive changes in perceptions. Further to this, the importance of these findings is manifested in that they are building up citizen trust in state after a period of violence and turbulence in the area and are keenly observed and recognized by the youth and being inculcated as a positive impact on their levels of trust in the state.

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Figures

Figure 1. Age distribution.

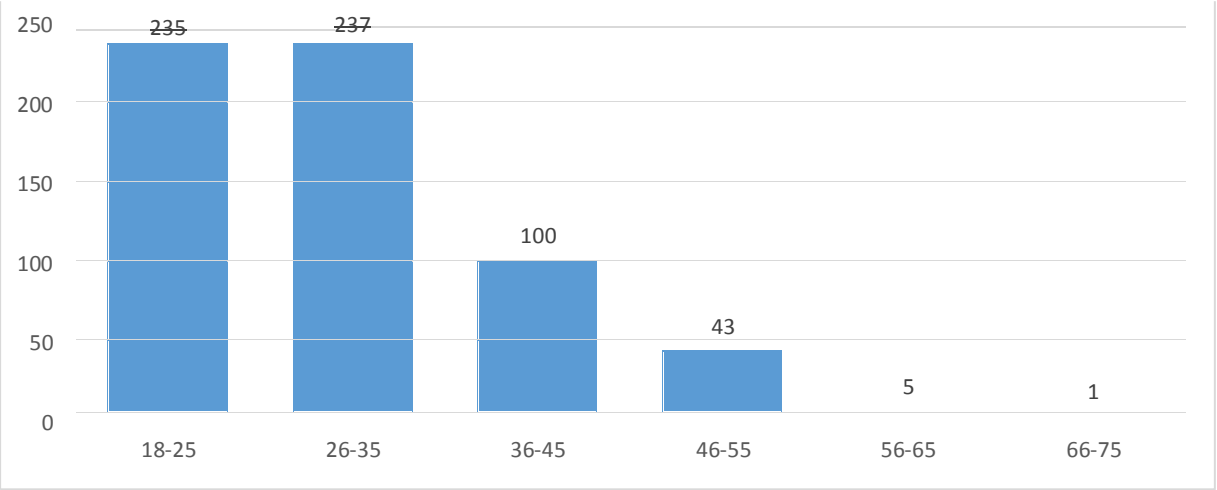


Figure 2. Gender distribution.

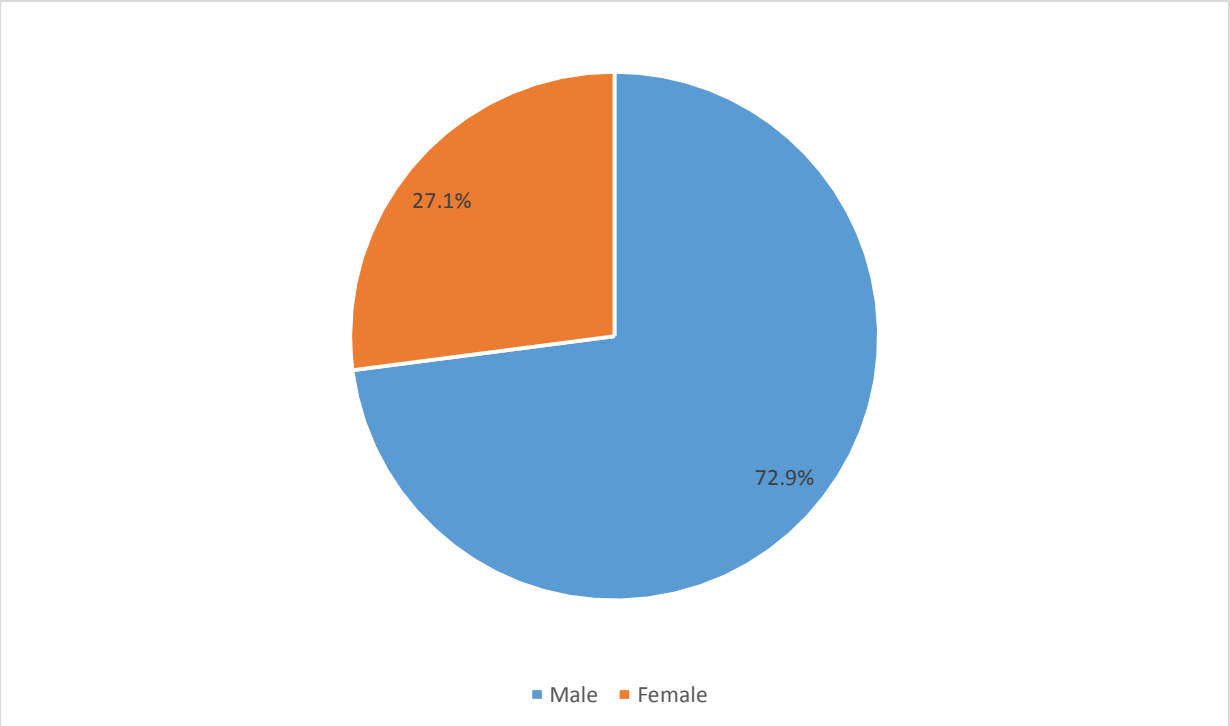


Figure 3. Marital status distribution.

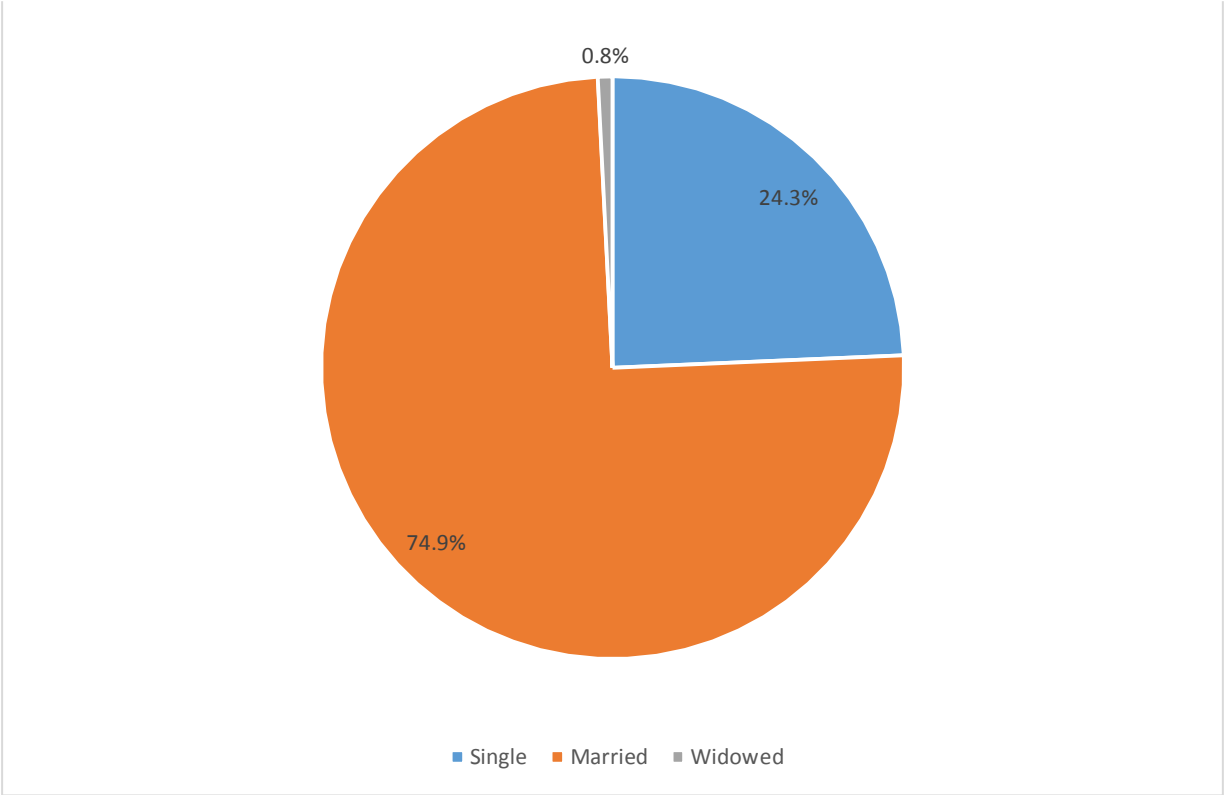


Figure 4. Education level distribution.

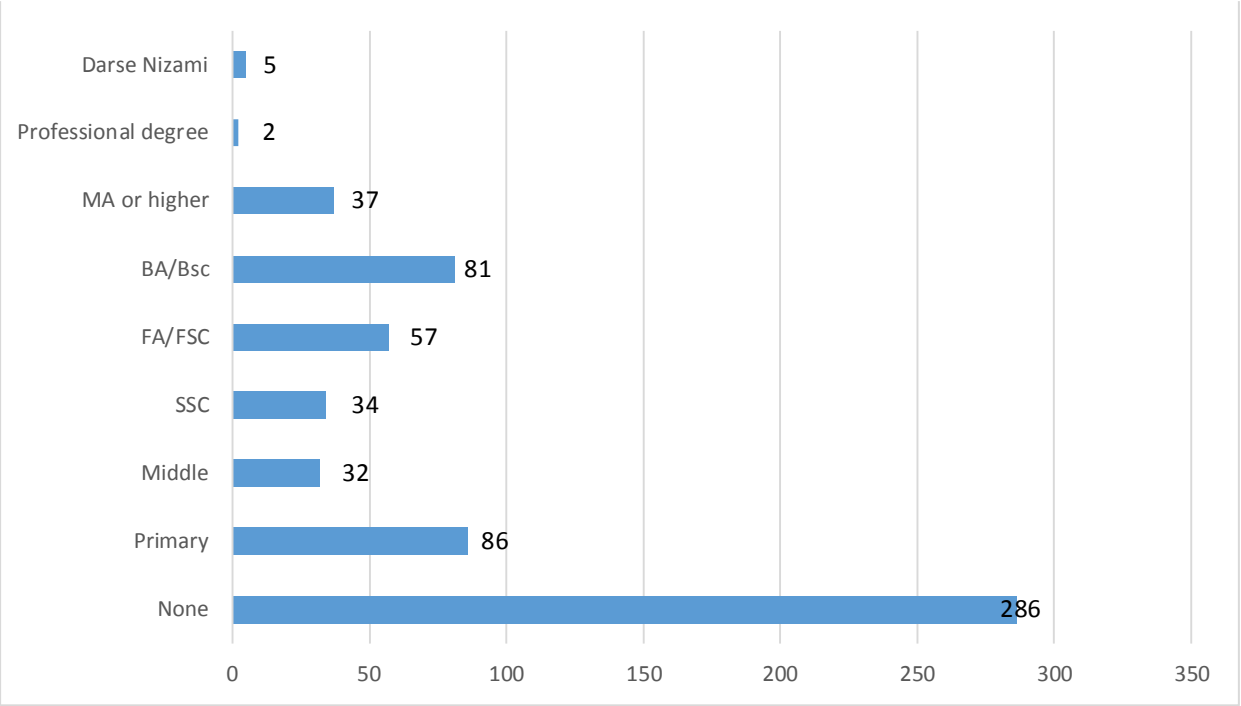


Figure 5. Profession distribution.

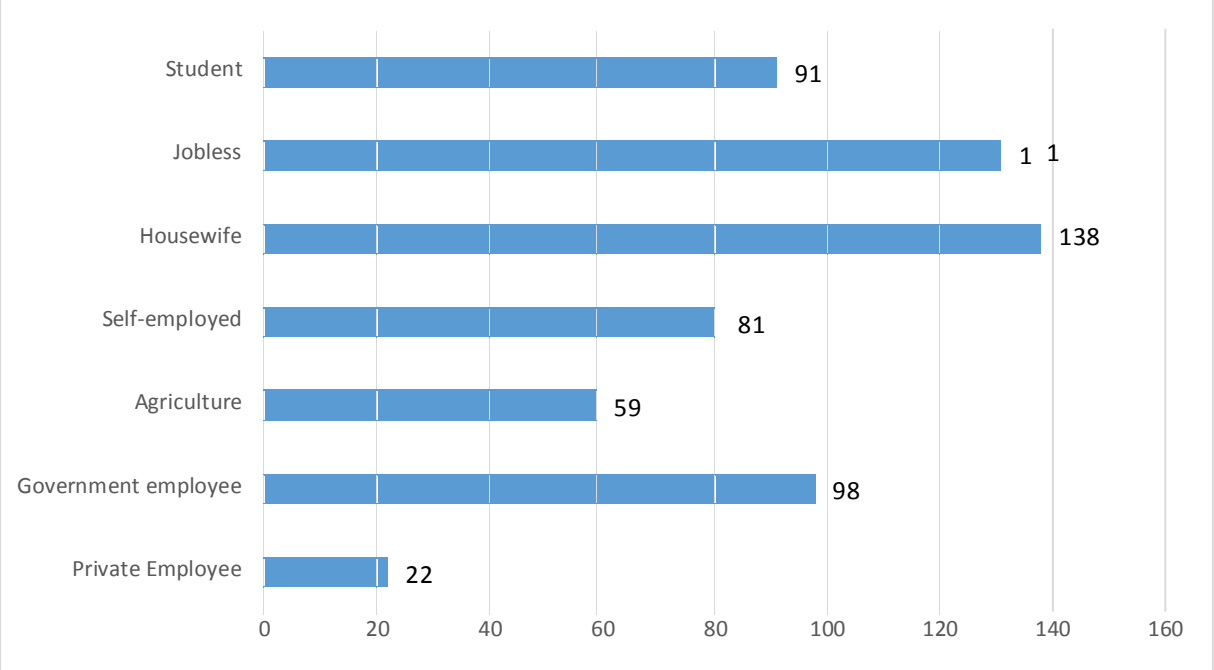


Figure 6. Ethnicity distribution.

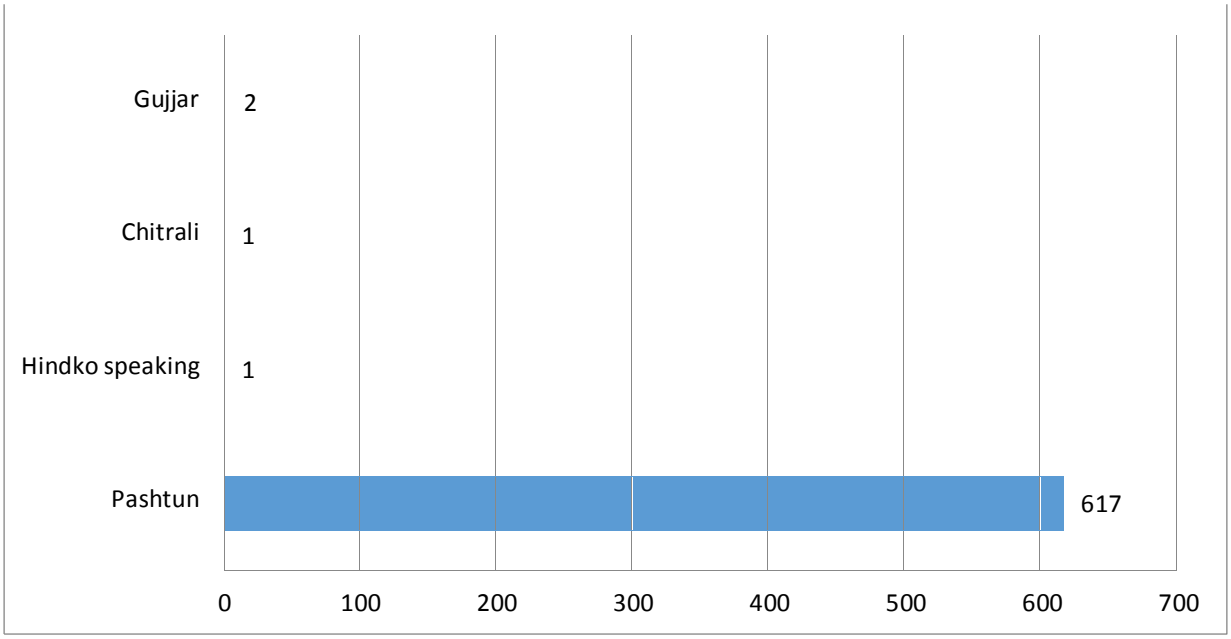


Figure 7. Vehicle ownership in the sample

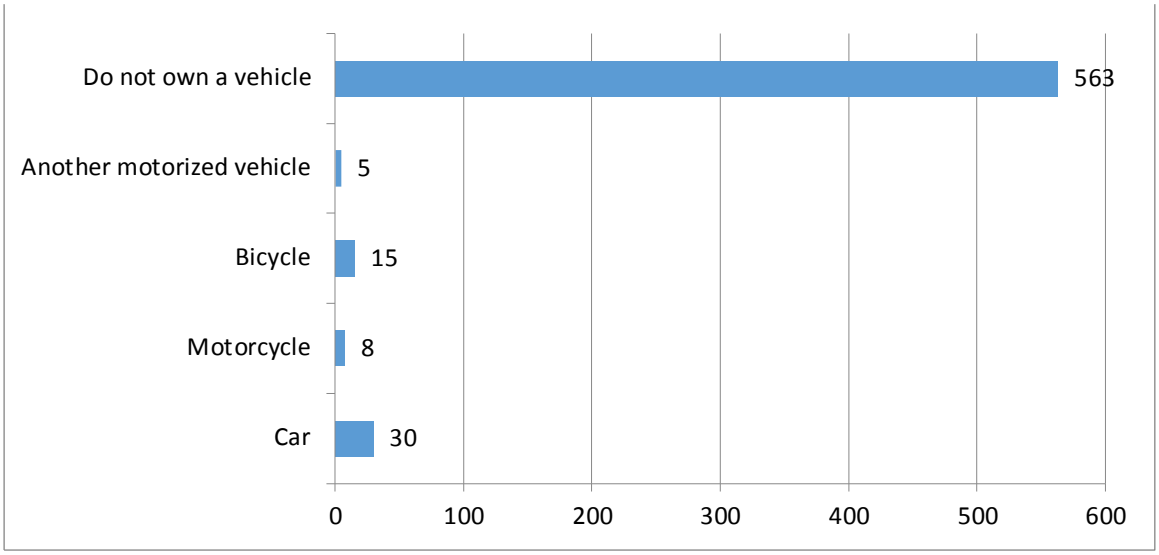


Figure 8. Home ownership in the sample

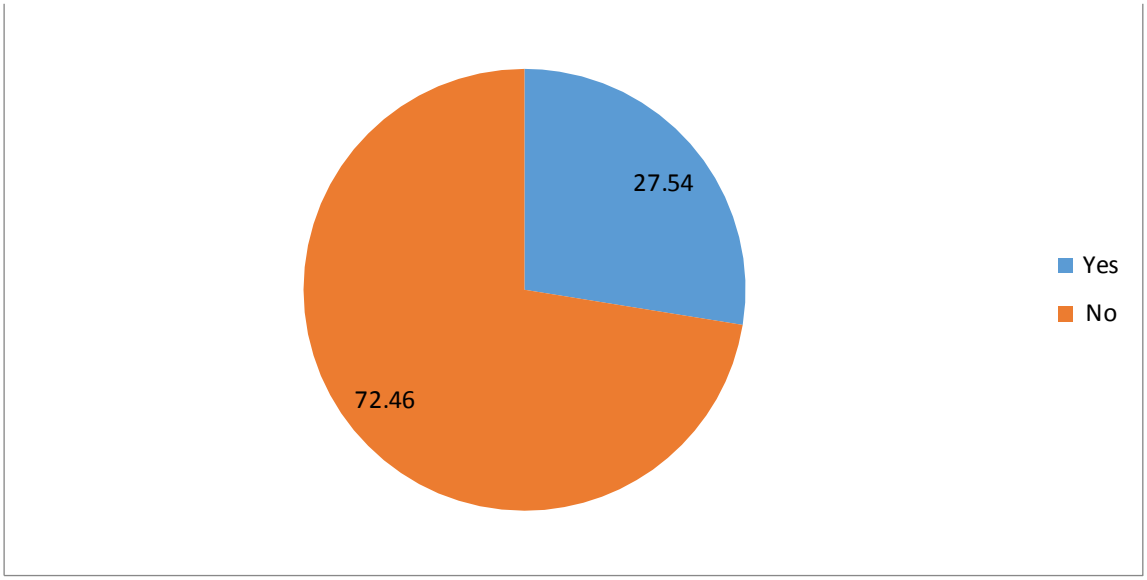


Figure 9. Land ownership.

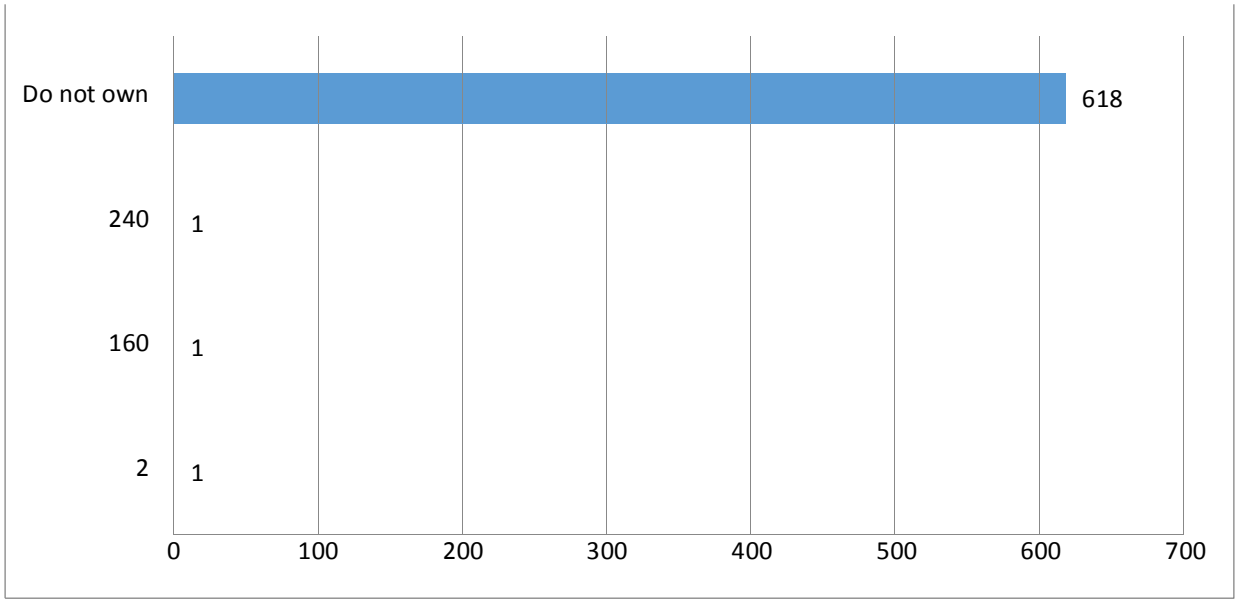
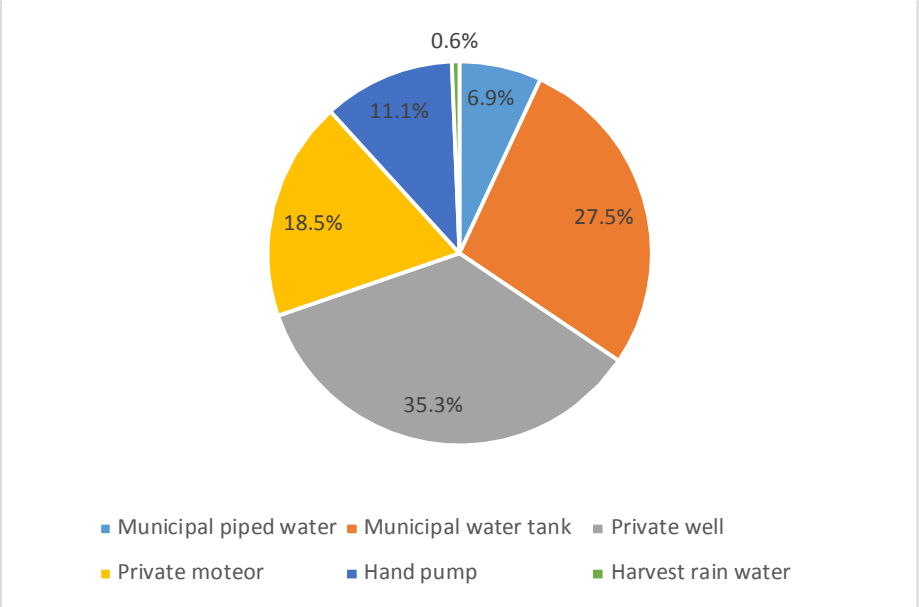


Figure 10. Primary source of drinking water



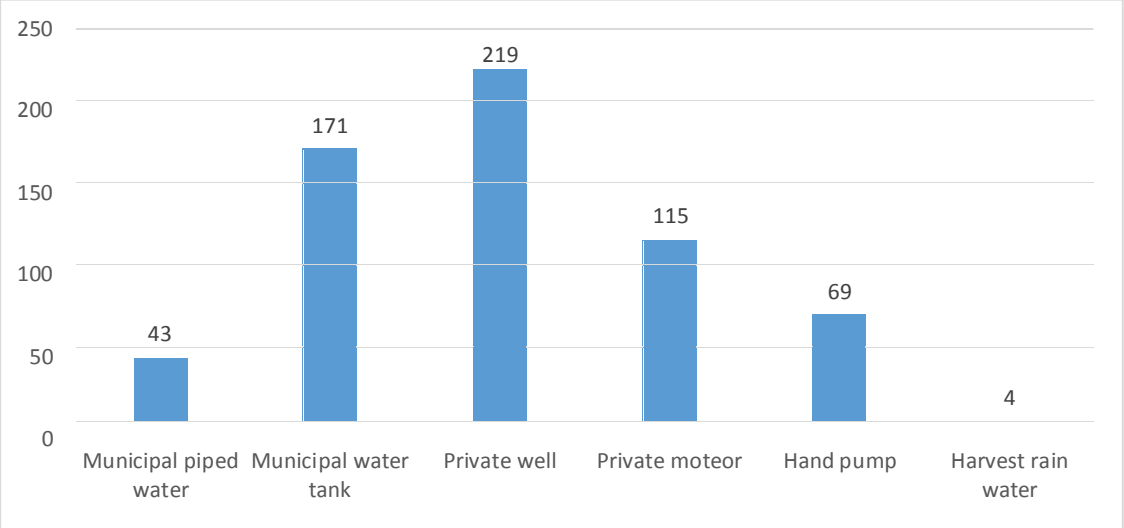
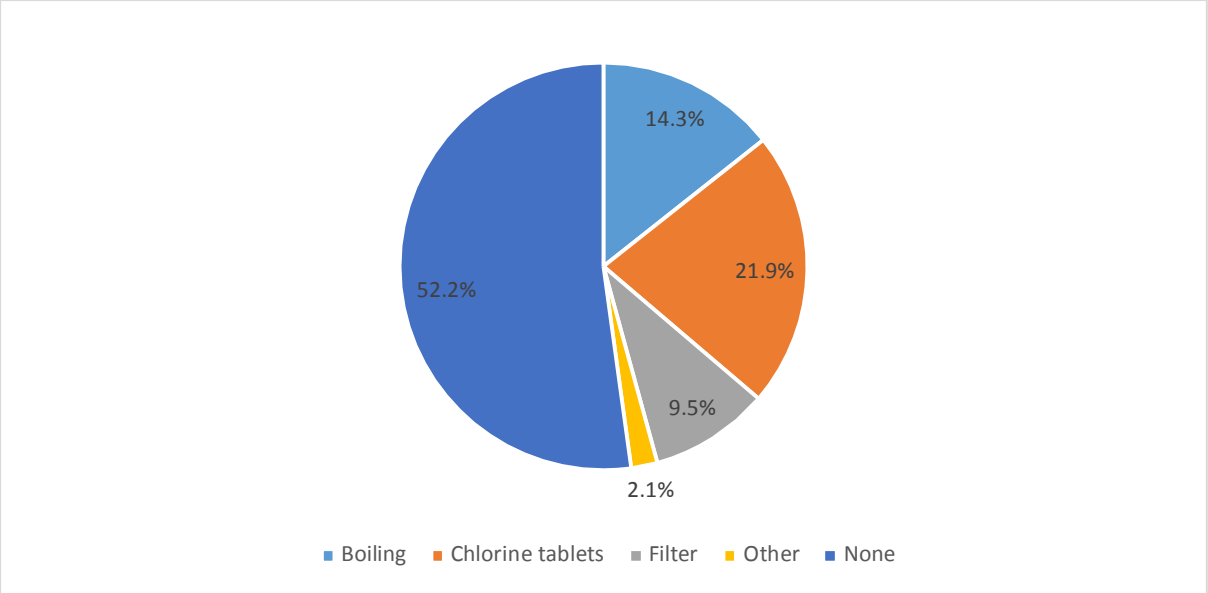


Figure 11. Water purification method.



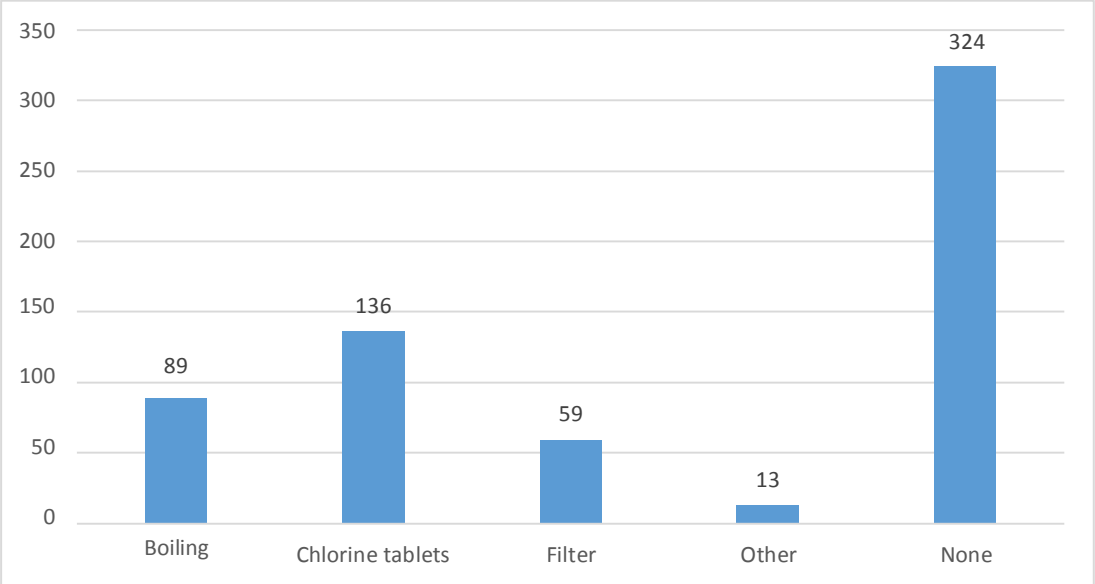


Figure 12. Perception of quality of drinking water

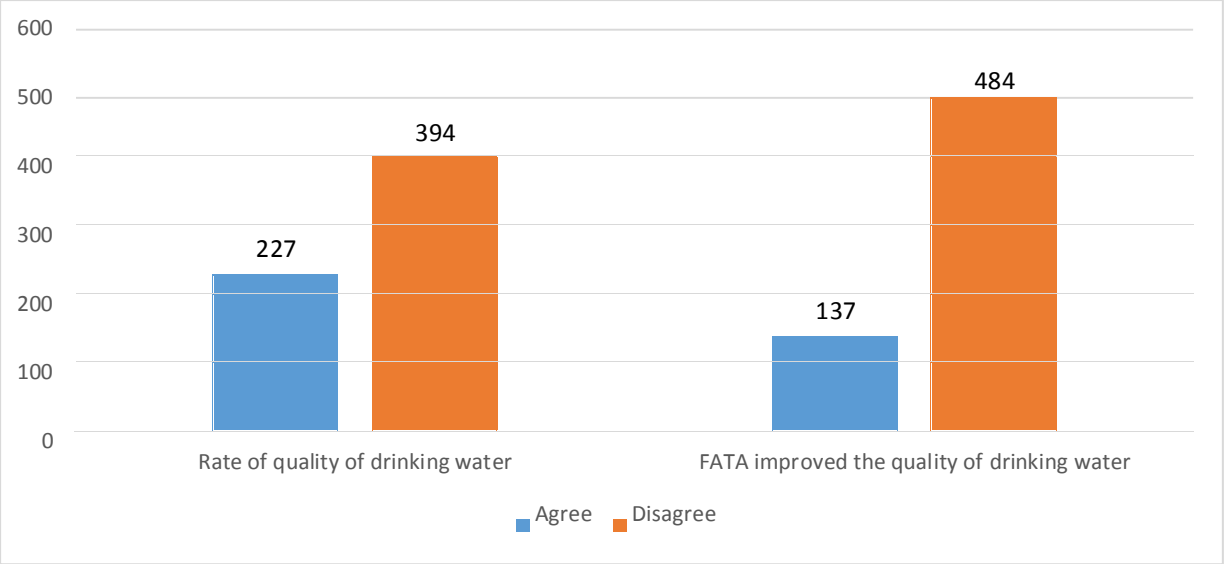
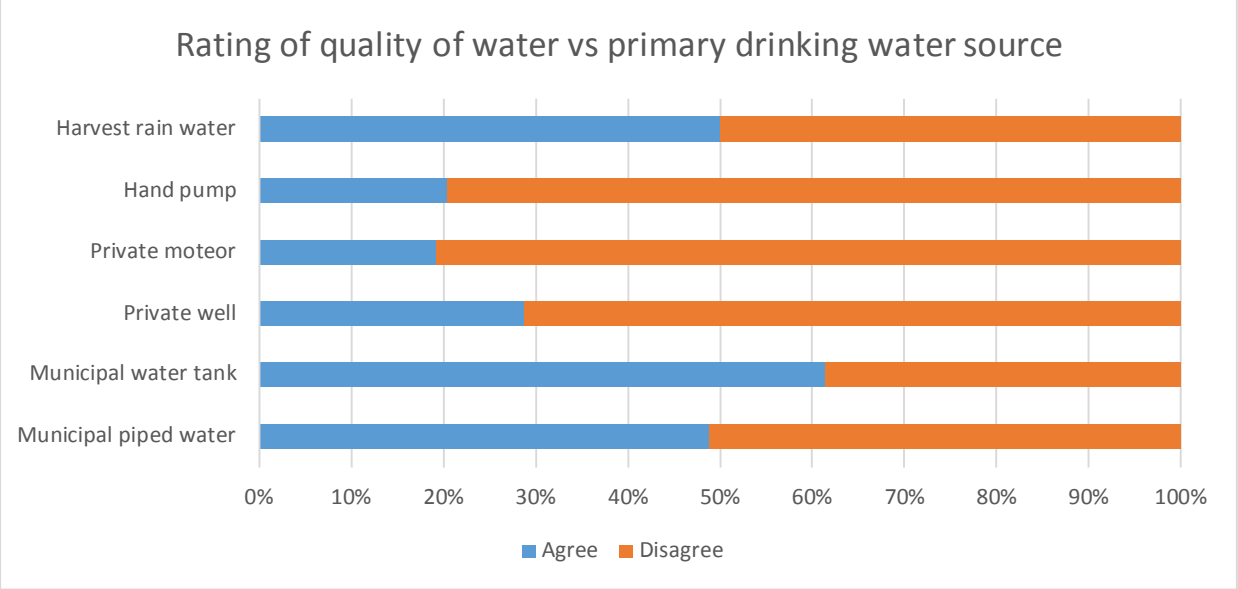


Figure 13. Perception of quality of drinking water versus primary drinking water source.



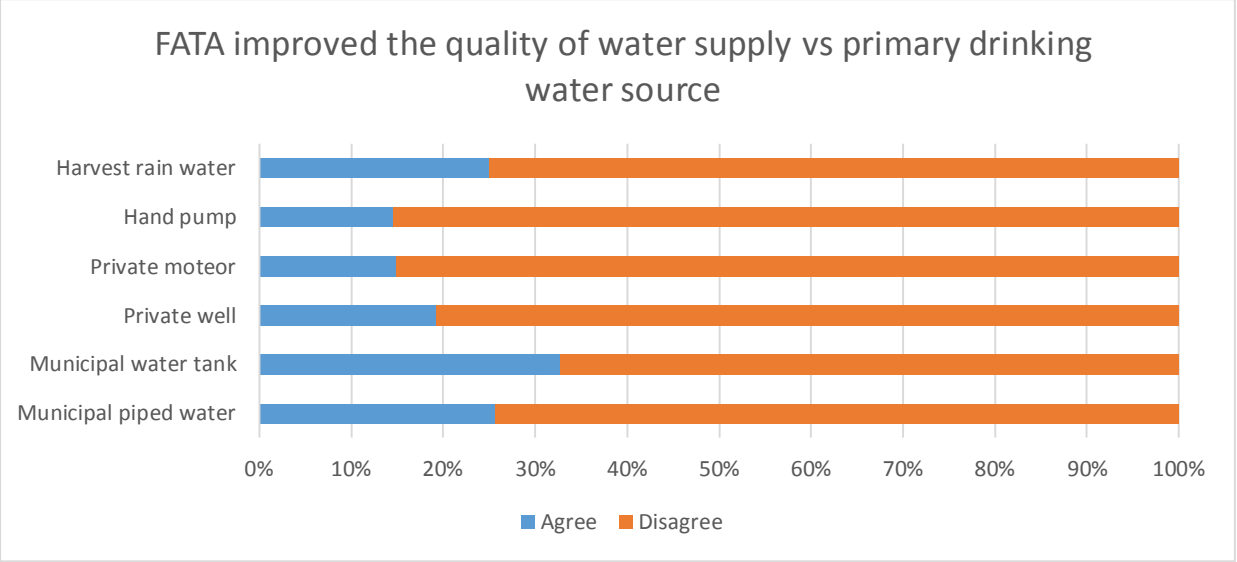
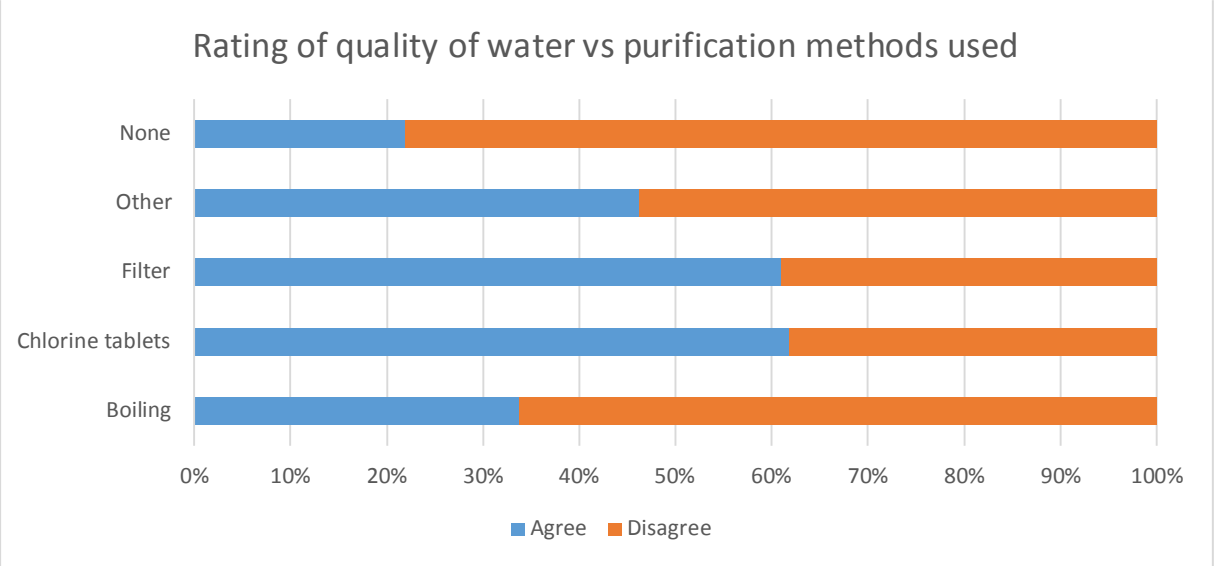


Figure 14. Perception of quality of drinking water versus water purification method



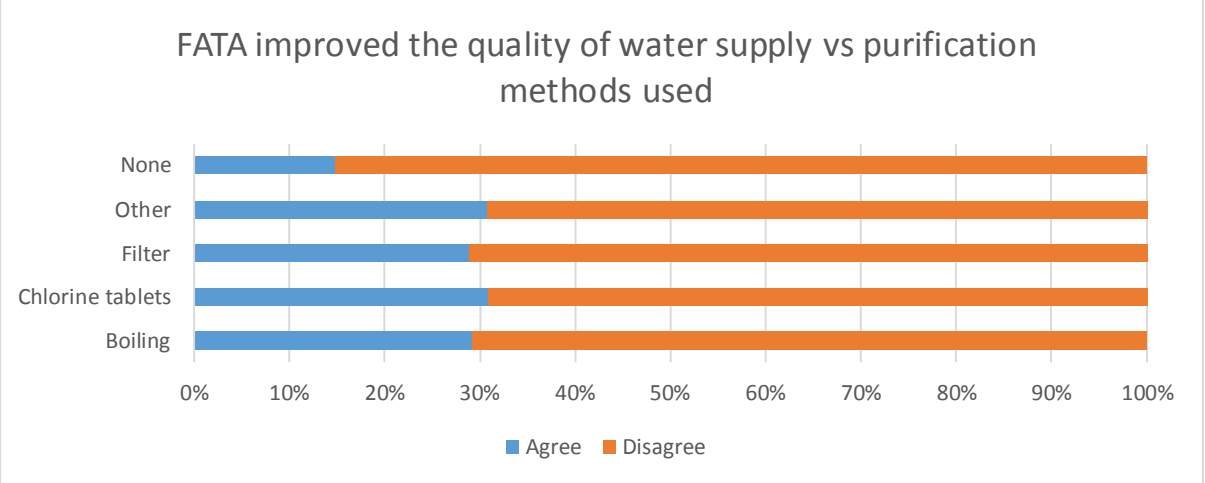


Figure 15. Many people claim that FATA has a special status due to its tribal traditions; therefore, it should have a special administrative arrangement. In your opinion, which of the following administrative structures should FATA have?

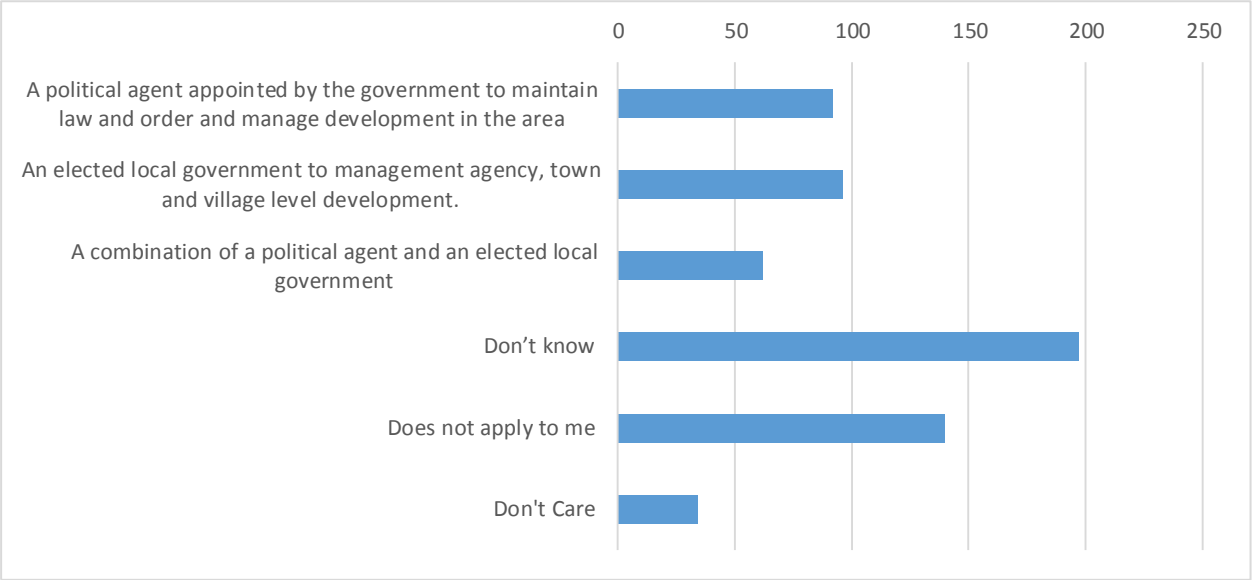


Figure 16. In your opinion, which of the following administrative structures should FATA have?

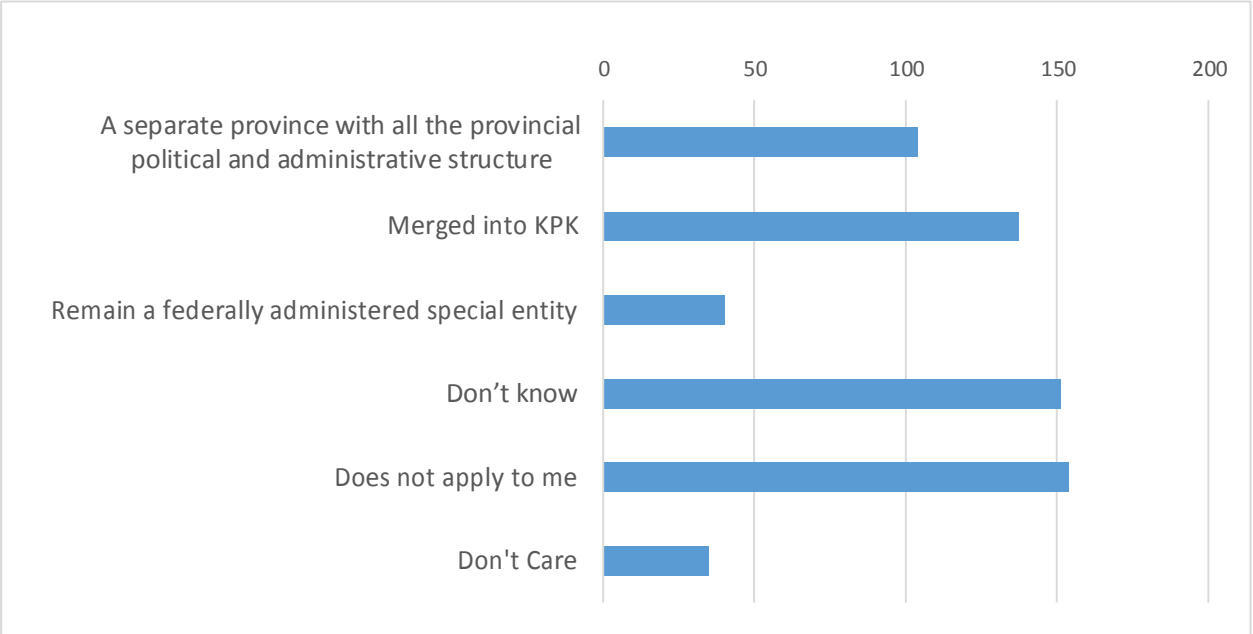


Figure 17. In your opinion, which of the following entities would best improve service delivery in your district or agency?

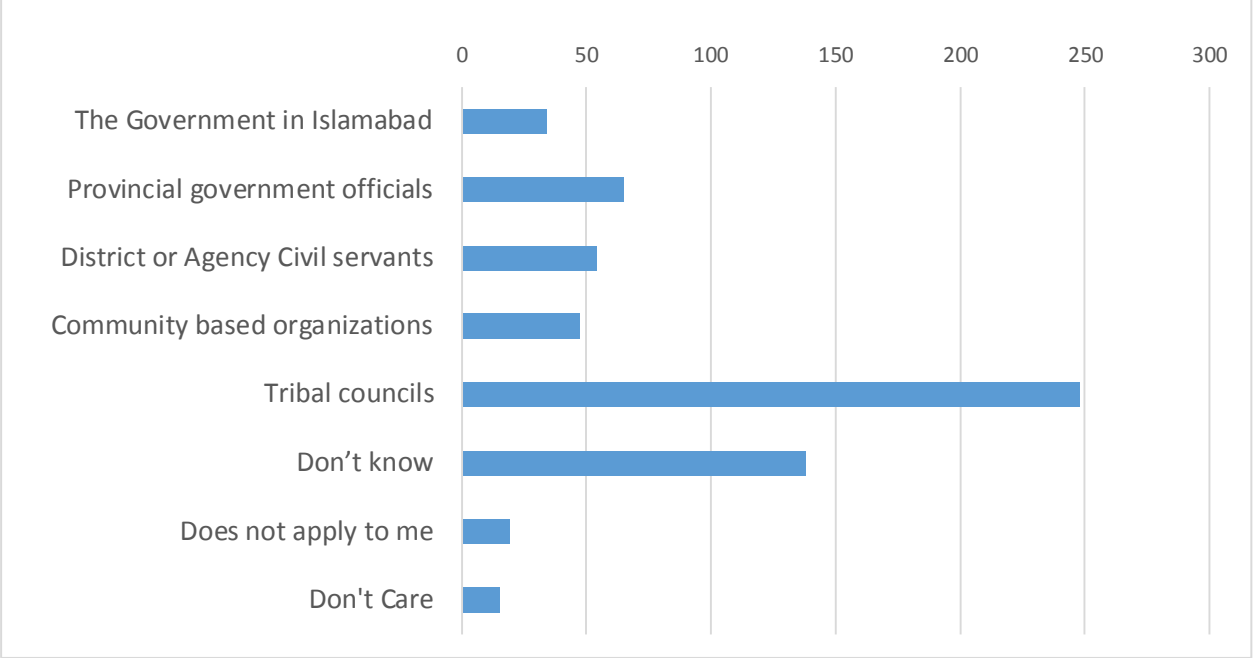


Figure 18. Role of the Office of the Political Agent.

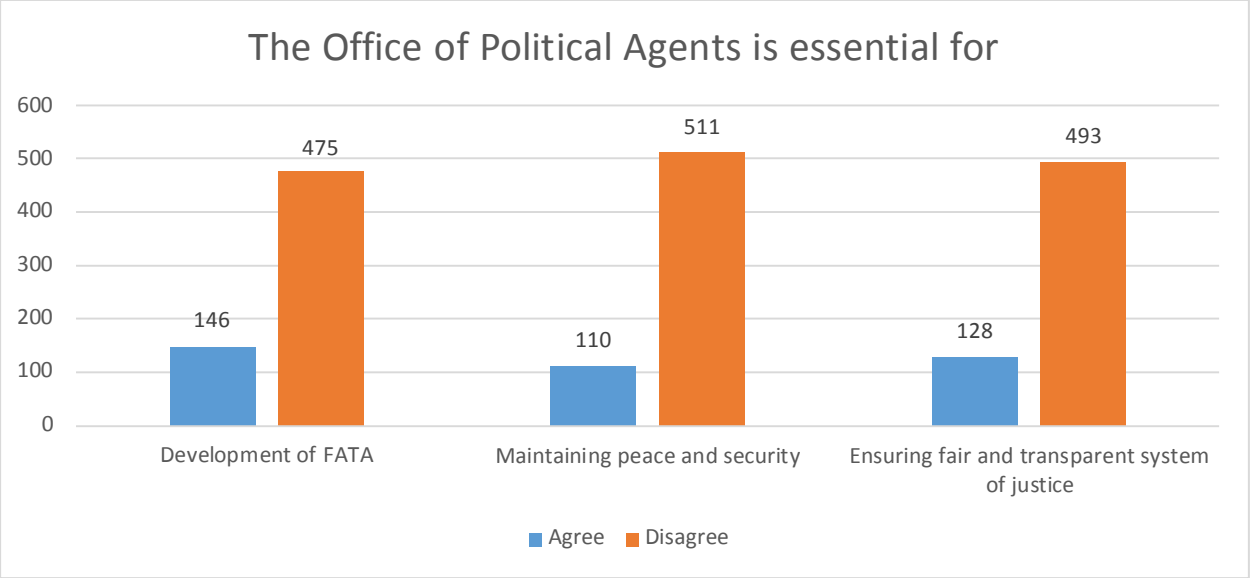


Figure 19. Satisfaction with quality of services and perception of improvements in various sectors.

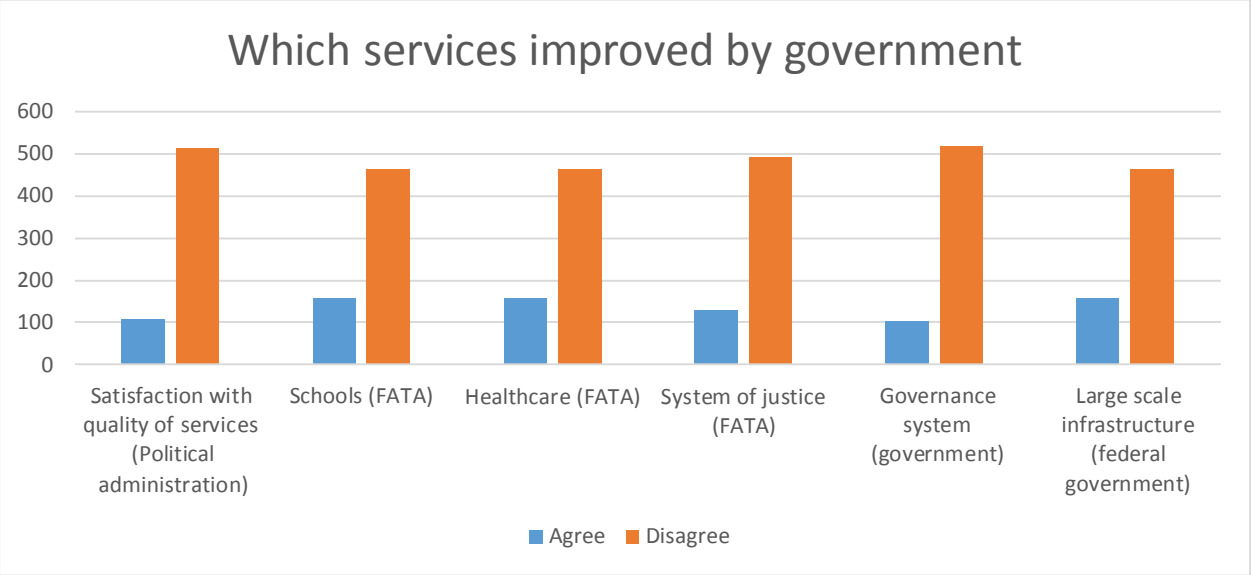


Figure 20. Over the past year, FATA Administration investments have improved the local infrastructure in your region.

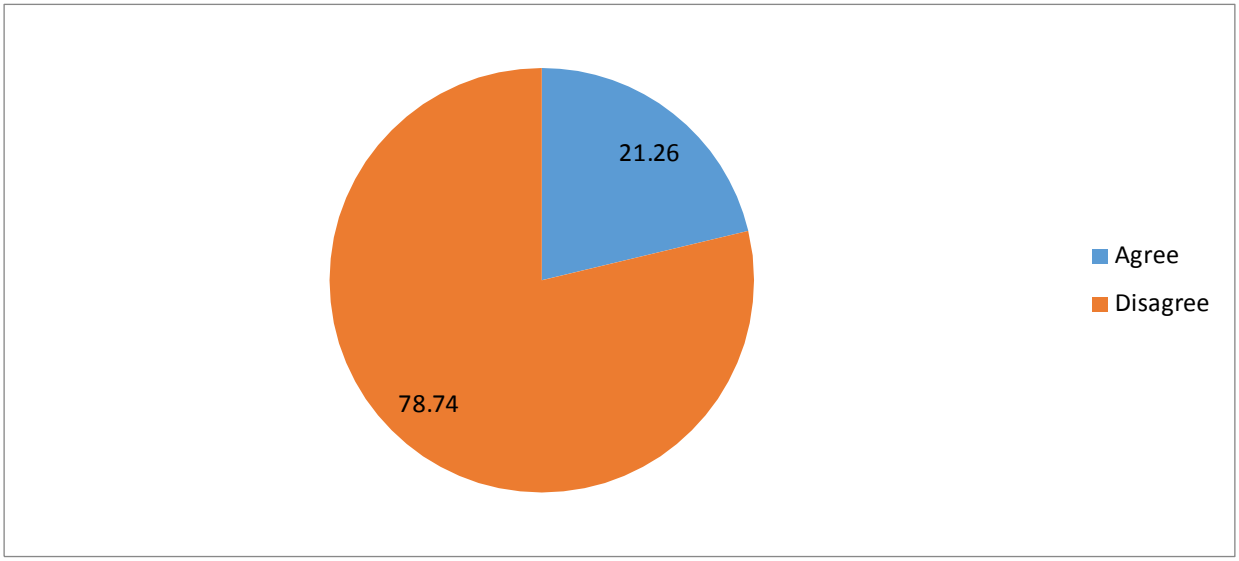


Figure 21. Improvements of street light by FATA administration.

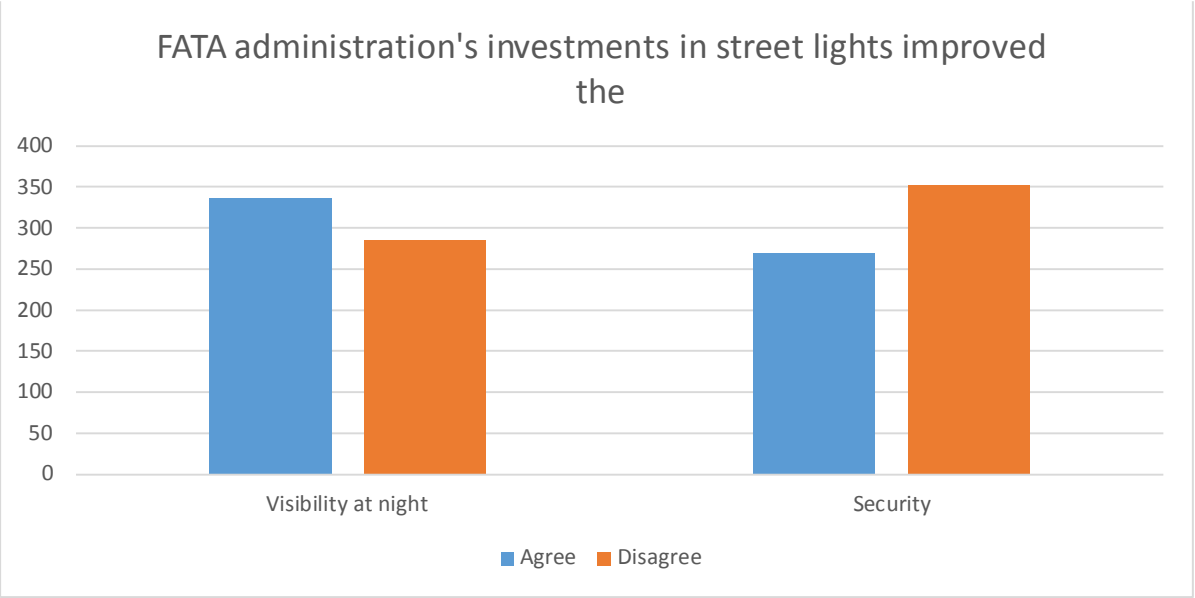


Figure 22. Trust in institutions

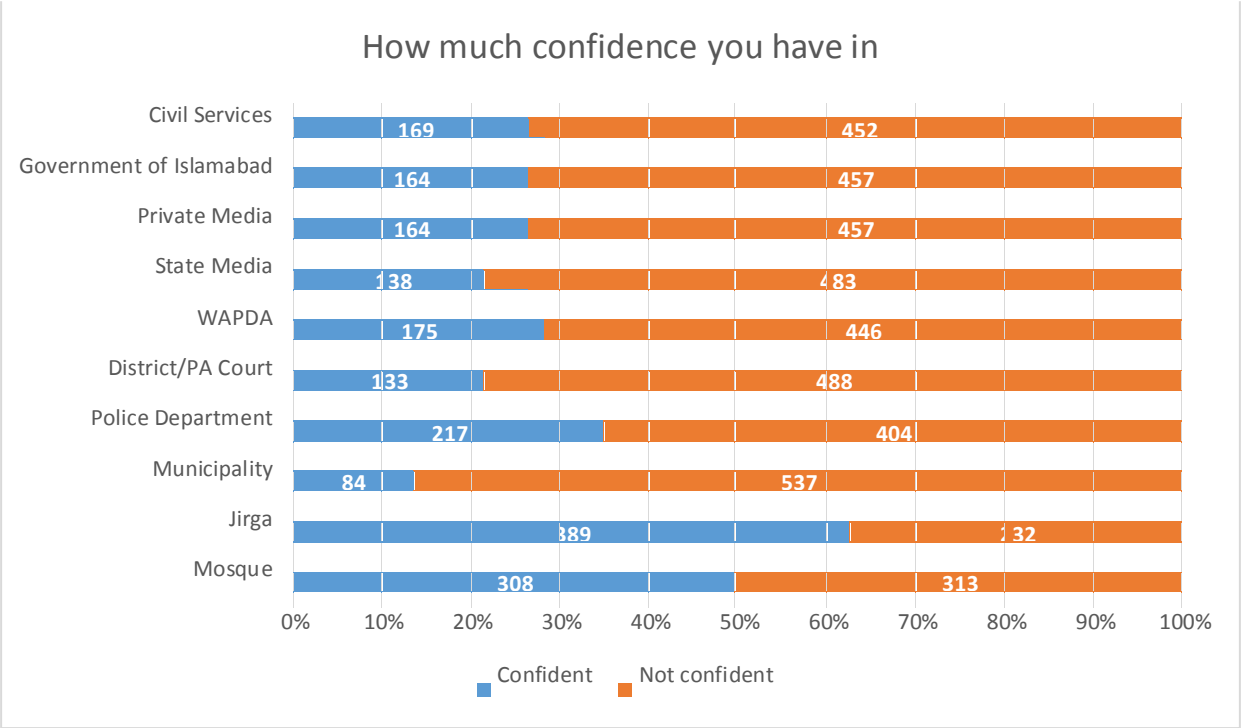


Figure 23. How interested would you say you are in politics?

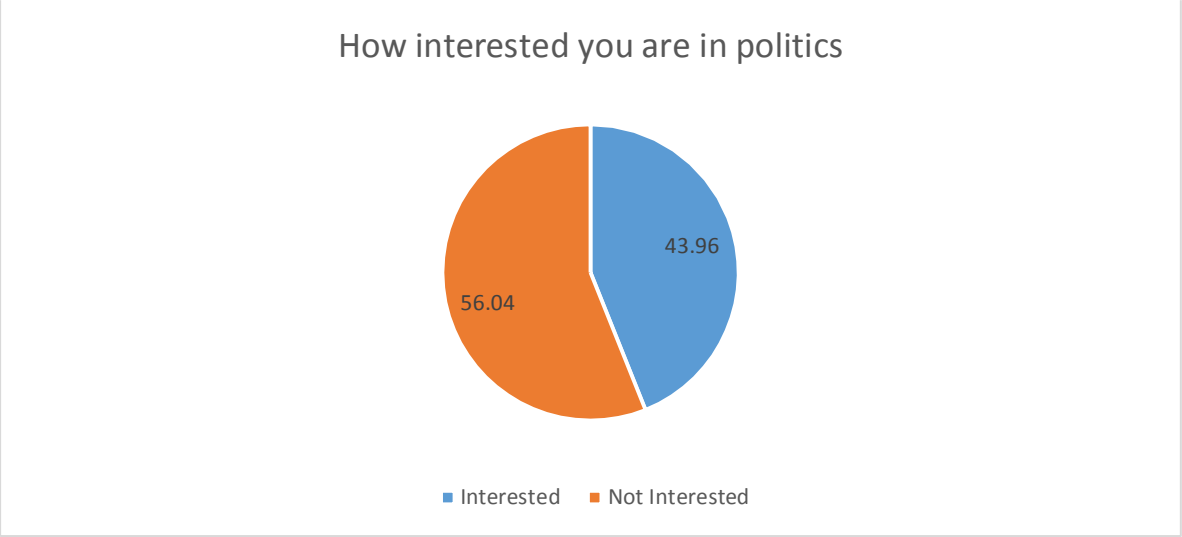


Figure 24. Satisfaction with life as a whole.

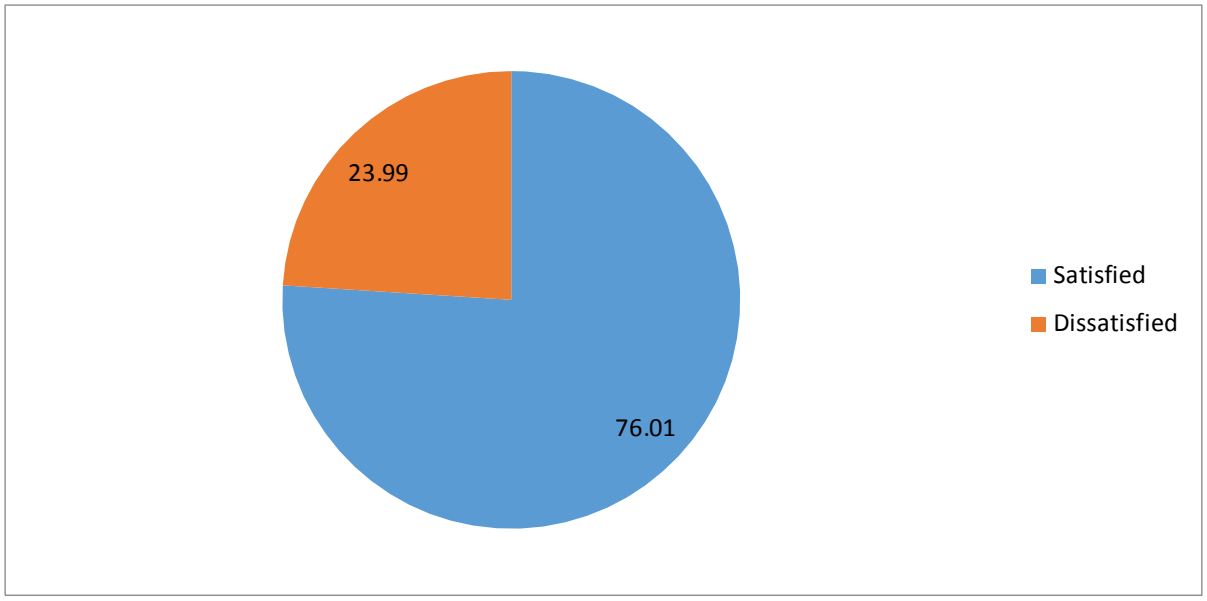


Figure 25. Satisfaction with financial situation.

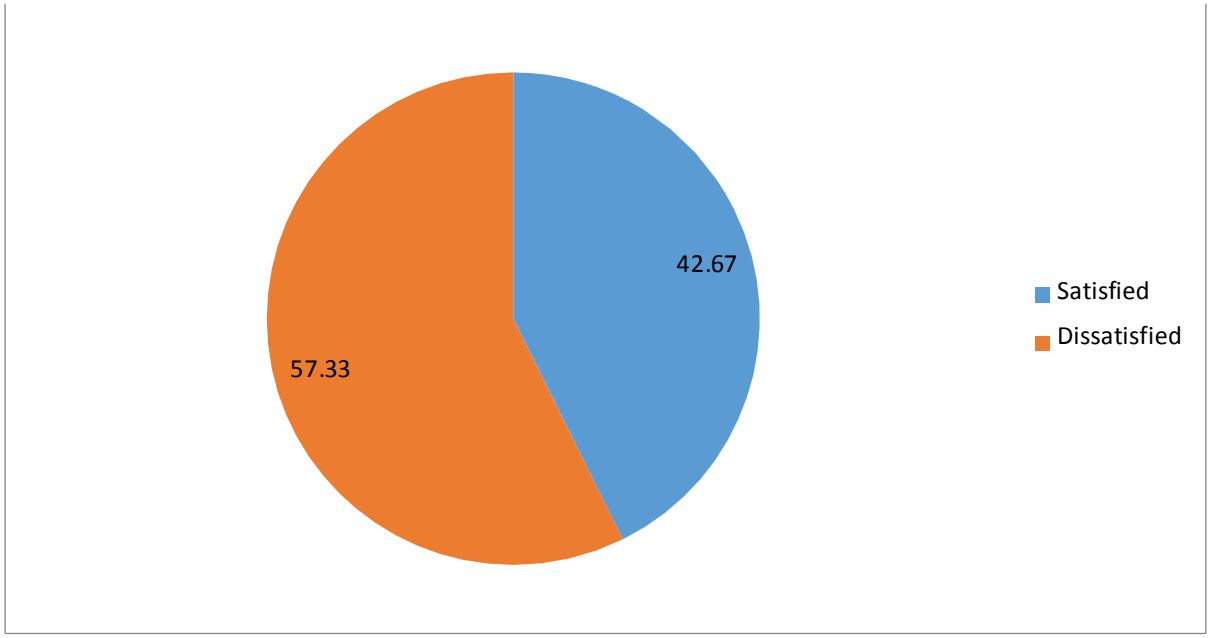


Figure 27. How proud to be a Pakistani

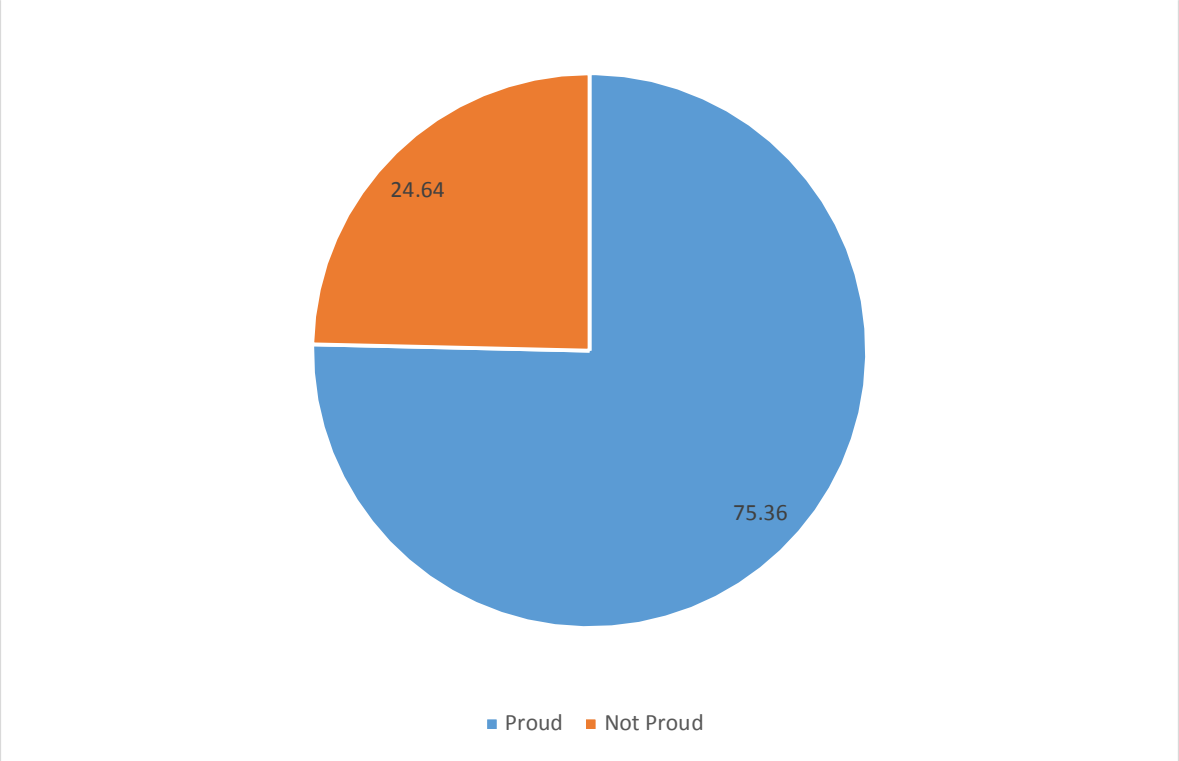


Figure 26. Satisfaction with life, home, job, health and community.

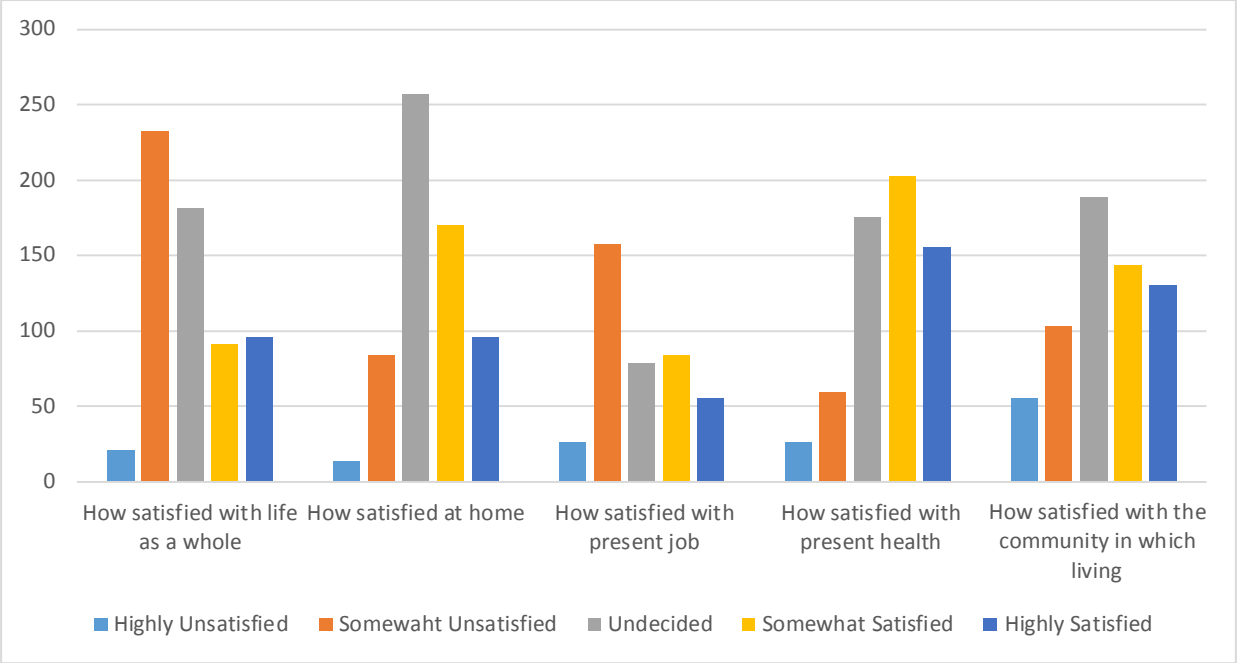


Figure 28. How much violence have you or a member of your family witnessed over the past year?

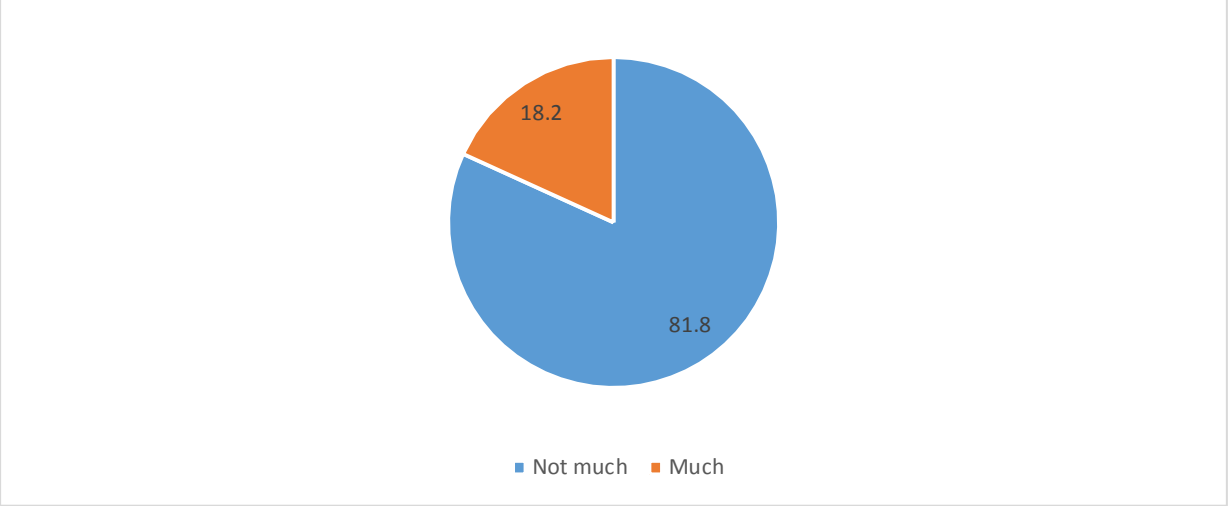


Figure 29. How often have you or members of your family heard artillery shells, drone strikes, or other violent explosions over the past year?

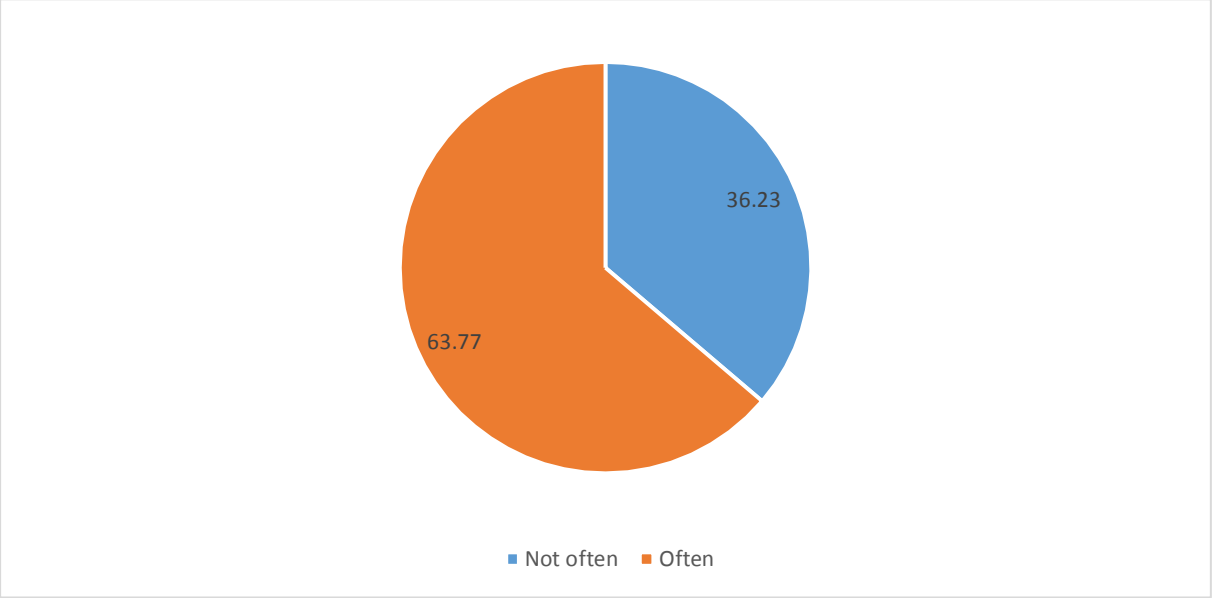


Figure 30. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?

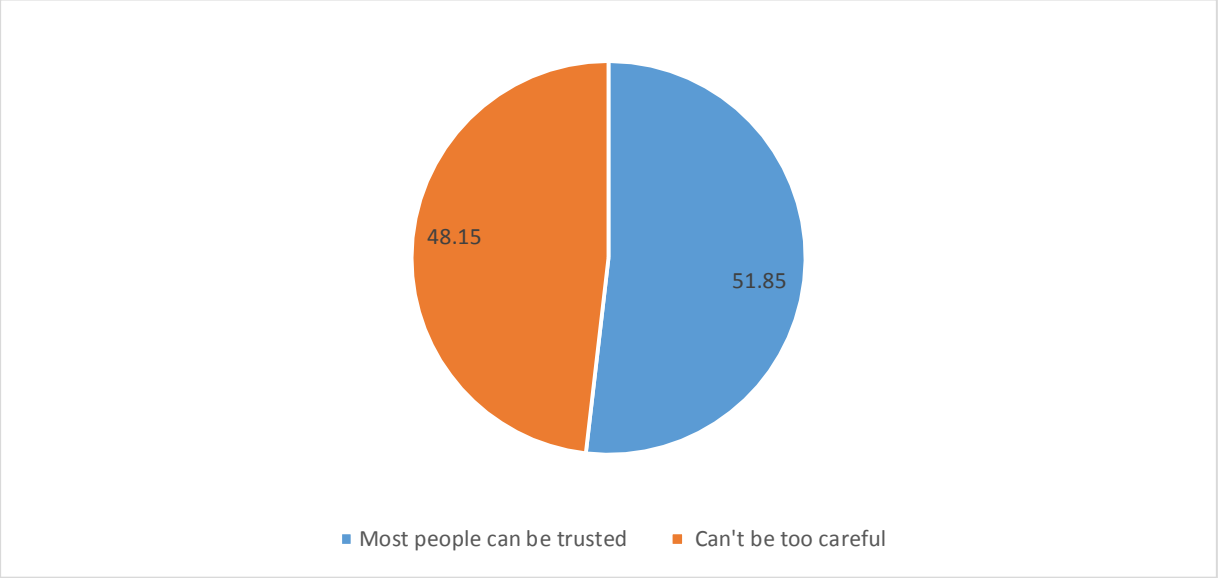


Figure 31. Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?

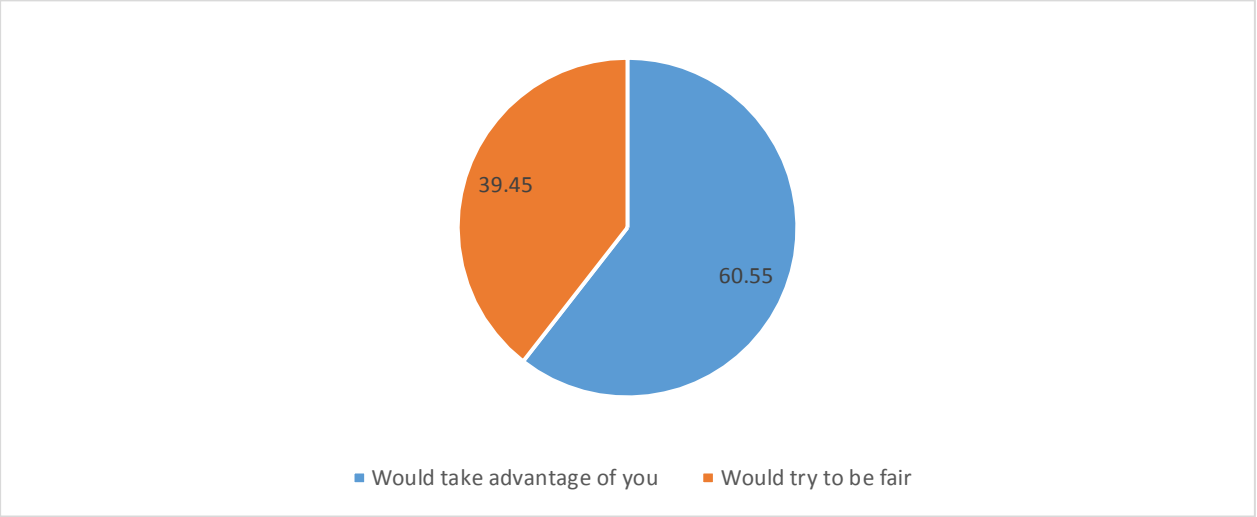


Figure 32. Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?

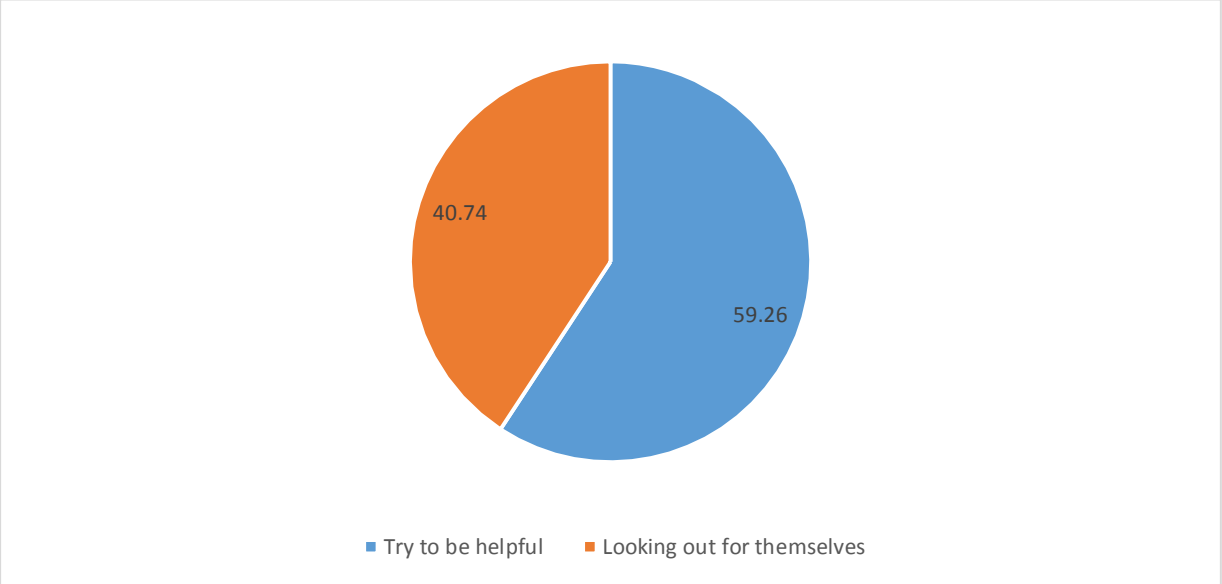


Figure 33. Willingness to help and trust in others.

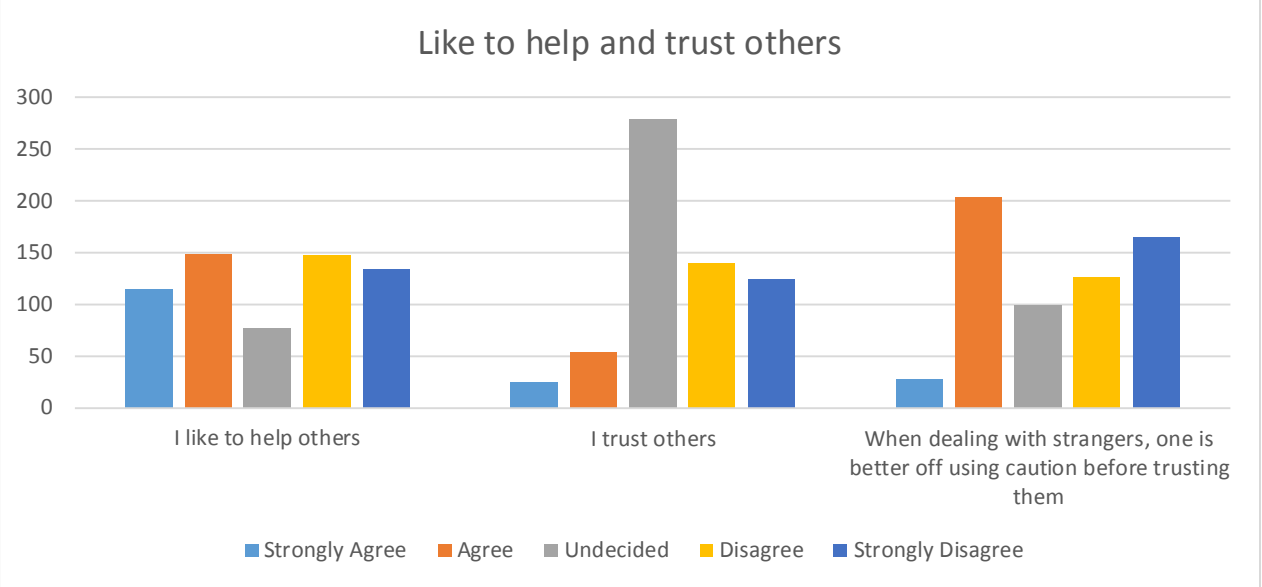
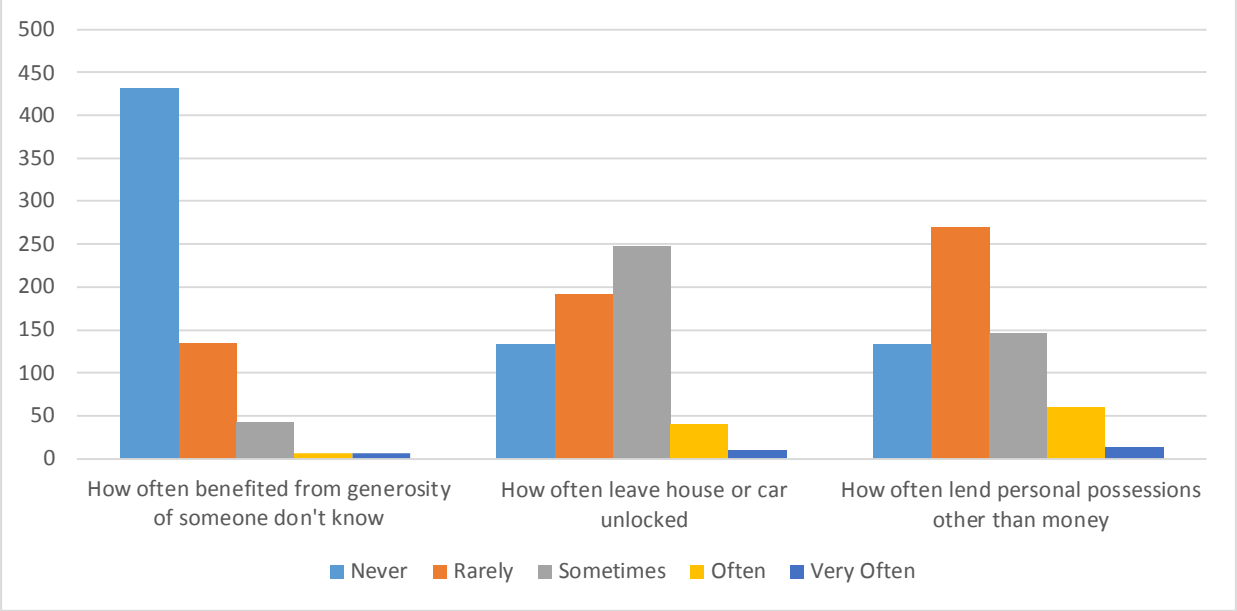


Figure 34. Benefit from generosity, leaving house/car unlocked and lending personal possessions other than money.



Regression Output Tables

Table S1. Estimated OLS coefficients of infrastructure treatment variables.

	Dependent variables								
Infrastructure improvements	Confidence in the Municipality	Quality of Drinking Water	Quality of Service	Confidence in the Government of Islamabad	Satisfaction with life	Proud to be Pakistani	Trust in people	Satisfaction with life at home	Satisfaction with community
Solar Street lights									
Number of solar street lights per household	0.088		0.285***	0.350***	-0.029	0.071	-0.126	0.084	-0.047
Solar street lights installed in the neighborhood (1 if Yes)	0.065**		0.113***	0.075**	-0.062*	0.055	0.011	-0.005	-0.126***
Drinking water improvements in process of installation (1 if Yes)		0.108***	0.073**	0.026	-0.056	0.050	0.012	-0.016	-0.108***
Solar tube wells in process of installation (1 if Yes)		0.156***							
Conventional tube wells in process of installation (1 if Yes)		0.061							
Rehabilitation tube wells in process of installation (1 if Yes)		0.081							

Note: In "Confidence in the Municipality" estimations the solar street light treatment variables are included separately. In "Quality of Drinking Water" estimations the overall drinking water improvements treatment variable is included separately, while more detailed treatment variables are included together in one regression. In "Quality of Service" and the rest of estimations both solar street light variables and drinking water improvements treatment variable is included separately in each regression.

*indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table S2. Estimated Probit coefficients of infrastructure treatment variables.

	Dependent variables								
Infrastructure improvements	Confidence in the Municipality	Quality of Drinking Water	Quality of Service	Confidence in the Government of Islamabad	Satisfaction with life	Proud to be Pakistani	Trust in people	Satisfaction with life at home	Satisfaction with community
Solar Street lights									
Number of solar street lights per household	0.458		0.980***	1.238***	-0.141	0.476	-0.478	0.302	-0.133
Solar street lights installed in the neighborhood (1 if Yes)	0.476***		0.577***	0.336**	-0.220*	0.218*	0.053	0.019	-0.422***
Drinking water improvements in process of installation (1 if Yes)		0.444***	0.366**	0.096	-0.189	0.195	0.060	-0.022	-0.374***
Solar tube wells in process of installation (1 if Yes)		0.570***							
Conventional tube wells in process of installation (1 if Yes)		0.179							
Rehabilitation tube wells in process of installation (1 if Yes)		0.370*							

Note: In "Confidence in the Municipality" estimations the solar street light treatment variables are included separately. In "Quality of Drinking Water" estimations the overall drinking water improvements treatment variable is included separately, while more detailed treatment variables are included together in one regression. In "Quality of Service" and the rest of estimations both solar street light variables and drinking water improvements treatment variable is included separately in each regression.

*indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table S3. Estimated Marginal effects of infrastructure treatment variables.

Marginal effects	Dependent variables								
Infrastructure improvements	Confidence in the Municipality	Quality of Drinking Water	Quality of Service	Confidence in the Government of Islamabad	Satisfaction with life	Proud to be Pakistani	Trust in people	Satisfaction with life at home	Satisfaction with community
Solar Street lights									
Number of solar street lights per household	0.071		0.205***	0.360***	-0.039	0.136	-0.189	0.117	-0.051
Solar street lights installed in the neighborhood (1 if Yes)	0.075***		0.124***	0.096**	-0.062*	0.062*	0.021	0.007	-0.166***
Drinking water improvements in process of installation (1 if Yes)		0.444***	0.080**	0.028	-0.054	0.056	0.024	-0.008	-0.147***
Solar tube wells in process of installation (1 if Yes)		0.570***							
Conventional tube wells in process of installation (1 if Yes)		0.179							
Rehabilitation tube wells in process of installation (1 if Yes)		0.370*							

Note: In "Confidence in the Municipality" estimations the solar street light treatment variables are included separately. In "Quality of Drinking Water" estimations the overall drinking water improvements treatment variable is included separately, while more detailed treatment variables are included together in one regression. In "Quality of Service" and the rest of estimations both solar street light variables and drinking water improvements treatment variable is included separately in each regression.

*indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Annex.I Sample Design

The survey was carried out in the Khar Area and Inayat Kalay area of Bajaur Agency.

Survey Questionnaire

Survey teams was trained on the survey questionnaire. Pilot testing carried out in the non-beneficiary areas of Khar Bajaur. At each stage necessary changes were made in the questionnaire to make the questions explicit and improve upon the translation.

Sample Description of Khar Bajaur.

The sample selection took place in following manner.

A total of ten areas were selected where interventions related to solar street lights and drinking water supply were made along with neighboring locality of Inayat Kalay, where no such interventions were made.

Table 1: Population Estimates According to Government of FATA (2013).

S #	Area	Intervention				Total (1998)	Total projected (2013)	House Hold	Sample	With 20% Over Sampling
		Solar TW	Conventional Tw	Rehab	Solar lights					
1	Sadiq Abad	✓			✓	4493	7593	844	35	42
2	Campsha	✓			✓	6002	10145	1127	47	56
3	Nawab Karoona	✓			✓	5327	9002	1000	42	50
4	Hafizabad		✓		✓	3625	6126	681	28	34
5	Civil Colony Khar and AHQ				✓	431	814	90	4	5
6	Lashora				✓	731	1,381	153	6	8
7	Qasimabad		✓		✓	6267	10591	1177	49	59
8	Khwajaabad			✓			25714	2857	119	143
9	Eid-gah			✓	✓					
10	Sports(complex)			✓						
	Shandi moor				✓	1118	2111	235	10	12
	Total						**73477**	**8164**	**340**	**408**
11	Inayat Kalay	**Counter factual** No Intervention has been made in the area				3410	6440	716	30	36
	Total						**6440**	**716**	**30**	**36**

The total population of Khar is 73,477 and that of the Inayat Kalay is 6,440. Number of households from these areas can be calculated by dividing the total population of the area on nine (9) to get the number of households in these areas (9 is assumed to be the average household size in FATA). Hence, resulting in a number of 8165 households for Khar and 716 households for Innayat Kalay. Out of these households an overall sample of 370 was calculated, at 95 percent confidence level and 5 percent margin of error, for these areas.

Table 2: Sample Distribution FUCP

S #	Sub - Division	Population	House Hold	Sample	Sample with Over-Sampling
1	**Khar**	73477	8165	340	408
2	**Inayat Kalay**	6440	716	30	204
Total		**79917**	**8881**	**370**	**612**

Overall Sample Description

The overall sample was calculated to be of 369 households in the survey, 339 from Khar and 36 from Inayat Kaley Village. But an over sampling of 68 (20 %) was added to the sample from Khar Bajaur and 174 (680%) from Innayat Kalay to compensate for incompleteness, non-responsiveness or other errors in data.

To maintain the beneficiary – non-beneficiary composition of the sample and to make the sample more representative, it was re-drawn on the basis of assigning weights to both the areas. The formulas used were as under:

Sample for Khar Bajaur:

$$\text{Sample from Area Khar Bajaur} = \frac{8165 * 370}{8881}$$

Sample for Innayat kalay:

$$\text{Sample from Area X in Bajaur} = \frac{716 * 370}{8881}$$

Where

8165 is the total number of households at Khar Bajaur

716 is the total number of households at Inayat Kalay

8881 is the overall household number in khar and Innayat kalay

370 is the total sample (95 percent confidence level and 5 percent margin of error)

First house will be selected randomly and then selecting each "nth" house from the area by the given formula .i.e. 1+12n

Annex.II Descriptive Statistics Tables

Table A.1. Age distribution.

Age group	Frequency	Percentage (%)
18-25	235	37.84
26-35	237	38.16
36-45	100	16.1
46-55	43	6.92
56-65	5	0.81
66-75	1	0.16

Table A.2. Gender distribution.

Gender	Frequency	Percentage (%)
Male	453	72.9%
Female	168	27.1%

Table A.3. Marital status distribution.

Marital status	Frequency	Percentage (%)
Single	151	24.3%
Married	465	74.9%
Widowed	5	0.8%

Table A.4. Education level distribution.

Education level	Frequency	Percentage (%)
None	286	46.05
Primary	86	13.85
Middle	32	5.15
SSC	34	5.48
FA/FSC	57	9.18
BA/Bsc	81	13.04
MA or higher	37	5.96
Professional degree	2	0.32
Darse Nizami	5	0.81

Table A.5. Profession distribution.

Profession	Frequency	Percentage (%)
Private Employee	22	3.54
Government employee	98	15.78
Agriculture	59	9.5
Self-employed	81	13.04
Housewife	138	22.22
Jobless	131	21.1
Student	91	14.65

Table A.6. Ethnicity distribution.

Ethnic group	Frequency	Percentage (%)
Pashtun	617	99.36
Hindko speaking	1	0.16
Chitrali	1	0.16
Gujjar	2	0.32

Table A.7. Vehicle ownership distribution.

Vehicle	Frequency	Percentage (%)
Car	30	4.83
Motorcycle	8	1.29
Bicycle	15	2.42
Another motorized vehicle	5	0.81
Do not own a vehicle	563	90.66

Table A.8. Home ownership.

Home ownership	Frequency	Percentage (%)
Yes	171	27.54
No	450	72.46

Table A.9. Land ownership.

Acres of land owned	Frequency	Percentage (%)
2	1	0.16
160	1	0.16
240	1	0.16
Do not own	618	99.52

Table A.10. Primary source of drinking water.

Primary source of drinking water	Frequency	Percentage (%)
Municipal piped water	43	6.9%
Municipal water tank	171	27.5%
Private well	219	35.3%
Private motor	115	18.5%
Hand pump	69	11.1%
Harvest rain water	4	0.6%

Table A.11. Water purification method.

Water purification method	Frequency	Percentage (%)
Boiling	89	14.3%
Chlorine tablets	136	21.9%
Filter	59	9.5%
Other	13	2.1%
None	324	52.2%

Table A.12. Perception of quality of drinking water.

	Rate of quality of drinking water	FATA improved the quality of drinking water
Agree	227	137
Disagree	394	484

Table A.13. Perception of quality of drinking water versus primary drinking water source.

	Rate of quality of drinking water		FATA improved the quality of drinking water	
Water source	Agree	Disagree	Agree	Disagree
Municipal piped water	21	22	11	32
Municipal water tank	105	66	56	115
Private well	63	156	42	177
Private motor	22	93	17	98
Hand pump	14	55	10	59
Harvest rain water	2	2	1	3

Table A.14. Perception of quality of drinking water versus water purification method.

	Rate of quality of drinking water		FATA improved the quality of drinking water	
Purification method	Agree	Disagree	Agree	Disagree
Boiling	30	59	26	63
Chlorine tablets	84	52	42	94
Filter	36	23	17	42
Other	6	7	4	9
None	71	253	48	276

Table A.15. Many people claim that FATA has a special status due to its tribal traditions; therefore, it should have a special administrative arrangement. In your opinion, which of the following administrative structures should FATA have?

Administrative structure	Frequency	Percentage (%)
A political agent appointed by the government to maintain law and order and manage development in the area	92	14.81
An elected local government to management agency, town and village level development.	96	15.46
A combination of a political agent and an elected local government	62	9.98
Don't know	197	31.72
Does not apply to me	140	22.54
Don't Care	34	5.48

Table A.16. In your opinion, which of the following administrative structures should FATA have?

Administrative structure	Frequency	Percentage (%)
A separate province with all the provincial political and administrative structure	104	16.75
Merged into KPK	137	22.06
Remain a federally administered special entity	40	6.44
Don't know	151	24.32
Does not apply to me	154	24.8
Don't Care	35	5.64

Table A.17. In your opinion, which of the following entities would best improve service delivery in your district or agency?

Entity	Frequency	Percentage (%)
The Government in Islamabad	34	5.48
Provincial government officials	65	10.48
District or Agency Civil servants	54	8.71
Community based organizations	47	7.58
Tribal councils	248	40
Don't know	138	22.26
Does not apply to me	19	3.06
Don't Care	15	2.42

Table A.18. Role of the Office of the Political Agent.

The Office of Political Agents is essential for	Development of FATA	Maintaining peace and security	Ensuring fair and transparent system of justice
Agree	146	110	128
Disagree	475	511	493

Table A.19. Satisfaction with quality of services and perception of improvements in various sectors.

	Satisfaction with quality of services (Political administration)	Schools (FATA)	Healthcare (FATA)	System of justice (FATA)	Governance system (government)	Large scale infrastructure (federal government)
Agree	109	159	158	128	103	159
Disagree	512	462	463	493	518	462

Table A. 20. Over the past year, FATA Administration investments have improved the local infrastructure in your region.

	Frequency	Percentage (%)
Agree	132	21.26
Disagree	489	78.74

Table A.21. Improvements of street light by FATA administration.

FATA administration's investments in street lights improved the	Visibility at night	Security
Agree	336	270
Disagree	285	351

Table A.22. Trust in institutions.

	Mosque	Jirga	Municipality	Police Department	District/PA Court
Confident	308	389	84	217	133
Not confident	313	232	537	404	488
	WAPDA	State Media	Private Media	Government of Islamabad	Civil Services
Confident	175	138	164	164	169
Not confident	446	483	457	457	452

Table A.23. How interested would you say you are in politics?

	Frequency	Percentage (%)
Interested	273	43.96
Not Interested	348	56.04

Table A.24. Satisfaction with life as a whole.

	Frequency	Percentage (%)
Satisfied	472	76.01
Dissatisfied	149	23.99

Table A.25. Satisfaction with financial situation.

	Frequency	Percentage (%)
Satisfied	265	42.67
Dissatisfied	356	57.33

Table A.27. How proud to be a Pakistani.

	Frequency	Percentage (%)
Proud	468	75.36
Not Proud	153	24.64

Table A.26. Satisfaction with life, home, job, health and community.

	How satisfied with life as a whole	How satisfied at home	How satisfied with present job	How satisfied with present health	How satisfied with the community in which living
Highly Unsatisfied	21	13	26	26	55
Somewhat Unsatisfied	232	84	157	59	103
Undecided	181	257	78	175	188
Somewhat Satisfied	91	170	84	202	143
Highly Satisfied	96	95	55	155	130

Table A.28. How much violence have you or a member of your family witnessed over the past year?

	Frequency	Percentage (%)
Not much	508	81.8
Much	113	18.2

Table A.29. How often have you or members of your family heard artillery shells, drone strikes, or other violent explosions over the past year?

	Frequency	Percentage (%)
Not often	225	36.23
Often	396	63.77

Table A.30. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?

	Frequency	Percentage (%)
Most people can be trusted	322	51.85
Can't be too careful	299	48.15

Table A.31. Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?

	Frequency	Percentage (%)
Would take advantage of you	376	60.55
Would try to be fair	245	39.45

Table A.32. Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?

	Frequency	Percentage (%)
Try to be helpful	368	59.26
Looking out for themselves	253	40.74

Table A.33. Willingness to help and trust in others.

	I like to help others	I trust others	When dealing with strangers, one is better off using caution before trusting them
Strongly Agree	115	25	27
Agree	148	53	204
Undecided	77	279	99
Disagree	147	140	126
Strongly Disagree	134	124	165

Table A.34. Benefit from generosity, leaving house/car unlocked and lending personal possessions other than money

	How often benefited from generosity of someone don't know	How often leave house or car unlocked	How often lend personal possessions other than money
Never	431	133	133
Rarely	134	191	269
Sometimes	42	247	146
Often	7	40	60
Very Often	7	10	13

Annex III Detailed Results Tables

Table 1. Estimated OLS, Probit coefficients and Marginal effects for Solar Street lights intervention.

Dependent variable: Confidence in the Municipality (1 if Confident).

VARIABLES	(1) OLS	(2) OLS	(3) Probit	(4) Probit	(5) Marginal Effect	(6) Marginal Effect
Number of solar street lights per household	0.105		0.547		0.099	
	(0.089)		(0.351)		(0.064)	
Solar street lights installed in the neighborhood (1 if Yes)		0.084***		0.525***		0.096***
		(0.029)		(0.166)		(0.030)
Age - 26-35 (vs. 18-25)	0.047	0.039	0.272	0.201	0.048	0.036
	(0.037)	(0.035)	(0.196)	(0.186)	(0.034)	(0.033)
Age - 36-45 (vs. 18-25)	0.072	0.061	0.393	0.319	0.074	0.062
	(0.052)	(0.052)	(0.265)	(0.256)	(0.053)	(0.052)
Age - 46-55 (vs. 18-25)	-0.018	-0.022	-0.048	-0.133	-0.007	-0.019
	(0.083)	(0.079)	(0.416)	(0.387)	(0.057)	(0.053)
Age - 56-65 (vs. 18-25)	0.047	0.056	0.204	0.229	0.034	0.042
	(0.159)	(0.169)	(0.631)	(0.655)	(0.118)	(0.135)
Age - 66-75 (vs. 18-25)	-0.103	-0.139*				
	(0.080)	(0.081)				
Male (vs. Female)	-0.137***	-0.094**	-0.675***	-0.458**	-0.122***	-0.084**
	(0.048)	(0.046)	(0.208)	(0.195)	(0.037)	(0.036)
Married (vs. Single)	-0.088*	-0.072	-0.492**	-0.396*	-0.089**	-0.073*
	(0.051)	(0.049)	(0.237)	(0.228)	(0.044)	(0.042)
Number of children living with you	0.013	0.011	0.056	0.046	0.010	0.008
	(0.010)	(0.010)	(0.051)	(0.049)	(0.009)	(0.009)
Years of education	0.001	-0.001	0.002	-0.005	0.000	-0.001
	(0.003)	(0.003)	(0.015)	(0.015)	(0.003)	(0.003)
Profession - Private employee (vs. Jobless)	0.007	0.007	-0.009	-0.010	-0.002	-0.002
	(0.099)	(0.095)	(0.370)	(0.351)	(0.081)	(0.077)
Profession - Government employee (vs. Jobless)	-0.081*	-0.084**	-0.478*	-0.475*	-0.079*	-0.079*
	(0.043)	(0.042)	(0.263)	(0.255)	(0.042)	(0.041)
Profession - Agriculture (vs. Jobless)	-0.010	-0.018	-0.108	-0.095	-0.022	-0.020
	(0.052)	(0.051)	(0.281)	(0.273)	(0.057)	(0.056)
Profession - Self-employed (vs. Jobless)	0.034	0.018	0.213	0.147	0.052	0.035
	(0.055)	(0.052)	(0.260)	(0.250)	(0.066)	(0.061)
Profession - Housewife (vs. Jobless)	-0.051	-0.076	-0.276	-0.338	-0.052	-0.061
	(0.060)	(0.061)	(0.264)	(0.254)	(0.049)	(0.045)
Profession - Student (vs. Jobless)	-0.043	-0.019	-0.301	-0.126	-0.056	-0.026
	(0.049)	(0.051)	(0.293)	(0.266)	(0.051)	(0.054)
Own a vehicle (vs. Do not own)	0.133**	0.097	0.646***	0.487**	0.117***	0.089**
	(0.064)	(0.060)	(0.231)	(0.226)	(0.042)	(0.042)
Own a home (vs. Do not own)	0.002	0.000	0.055	0.031	0.010	0.006
	(0.043)	(0.041)	(0.218)	(0.198)	(0.039)	(0.036)
How satisfied are you with the financial situation of your	-0.030	-0.008	-0.135	-0.019	-0.024	-0.004
	(0.043)	(0.041)	(0.214)	(0.196)	(0.039)	(0.036)

household? (1 if Satisfied)						
How interested would you say you are in politics? (1 if Interested)	-0.066*	-0.057*	-0.391**	-0.337**	-0.071**	-0.062*
	(0.036)	(0.034)	(0.185)	(0.171)	(0.034)	(0.032)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.137***	-0.144***	-0.634***	-0.624***	-0.115***	-0.115***
	(0.046)	(0.046)	(0.175)	(0.169)	(0.032)	(0.031)
Constant	0.388***	0.320***	0.059	-0.410		
	(0.080)	(0.076)	(0.330)	(0.335)		
Observations	574	619	573	618	573	618
R-squared						

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 2. Estimated OLS, Probit coefficients and Marginal effects for Drinking water improvements intervention.

Dependent variable: Over the past year, the FATA administration's investments have improved the quality of my household's drinking water supply (1 if Agree).

VARIABLES	(1) OLS	(2) OLS	(3) Probit	(4) Probit	(5) Marginal Effect	(6) Marginal Effect
Solar tube wells in process of installation (1 if Yes)	0.163***		0.578***		0.150***	
	(0.053)		(0.179)		(0.047)	
Conventional tube wells in process of installation (1 if Yes)	0.036		0.080		0.021	
	(0.054)		(0.263)		(0.069)	
Rehabilitation tube wells in process of installation (1 if Yes)	0.088*		0.374**		0.097**	
	(0.049)		(0.179)		(0.047)	
Drinking water improvements in process of installation (1 if Yes)		0.110***		0.435***		0.114***
		(0.040)		(0.152)		(0.040)
Age - 26-35 (vs. 18-25)	0.047	0.043	0.237	0.233	0.057	0.056
	(0.049)	(0.049)	(0.176)	(0.175)	(0.042)	(0.042)
Age - 36-45 (vs. 18-25)	0.074	0.065	0.294	0.296	0.073	0.074
	(0.067)	(0.067)	(0.255)	(0.253)	(0.066)	(0.066)
Age - 46-55 (vs. 18-25)	0.204**	0.203**	0.861**	0.874**	0.266**	0.272**
	(0.099)	(0.100)	(0.344)	(0.344)	(0.119)	(0.120)
Age - 56-65 (vs. 18-25)	0.100	0.146	0.493	0.704	0.134	0.208
	(0.217)	(0.225)	(0.791)	(0.810)	(0.255)	(0.292)
Age - 66-75 (vs. 18-25)	-0.020	-0.080				
	(0.113)	(0.108)				
Male (vs. Female)	0.051	0.064	0.151	0.180	0.039	0.047
	(0.061)	(0.060)	(0.209)	(0.205)	(0.054)	(0.054)
Married (vs. Single)	-0.099	-0.096	-0.364	-0.355	-0.095	-0.093
	(0.066)	(0.066)	(0.238)	(0.234)	(0.061)	(0.061)
Number of children living with you	0.001	0.002	-0.004	-0.001	-0.001	-0.000
	(0.014)	(0.014)	(0.050)	(0.050)	(0.013)	(0.013)
Years of education	0.002	0.002	0.010	0.011	0.003	0.003
	(0.004)	(0.004)	(0.015)	(0.015)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	0.030	0.043	0.090	0.125	0.024	0.033
	(0.118)	(0.118)	(0.389)	(0.383)	(0.107)	(0.107)
Profession - Government employee (vs. Jobless)	0.074	0.088	0.226	0.268	0.064	0.076
	(0.059)	(0.059)	(0.204)	(0.202)	(0.058)	(0.058)
Profession - Agriculture (vs. Jobless)	-0.045	-0.043	-0.270	-0.284	-0.060	-0.062
	(0.060)	(0.059)	(0.257)	(0.255)	(0.055)	(0.053)
Profession - Self-employed (vs. Jobless)	0.001	-0.001	-0.094	-0.097	-0.023	-0.023
	(0.057)	(0.058)	(0.254)	(0.256)	(0.061)	(0.061)
Profession - Housewife (vs. Jobless)	0.052	0.054	0.155	0.159	0.042	0.043
	(0.076)	(0.075)	(0.261)	(0.258)	(0.073)	(0.071)
Profession - Student (vs. Jobless)	-0.022	-0.011	-0.081	-0.043	-0.020	-0.011
	(0.064)	(0.064)	(0.260)	(0.257)	(0.063)	(0.063)
Own a vehicle (vs. Do not own)	0.088	0.091	0.304	0.308	0.079	0.081
	(0.065)	(0.065)	(0.221)	(0.223)	(0.058)	(0.058)
Own a home (vs. Do not own)	0.048	0.045	0.293	0.246	0.076	0.064
	(0.049)	(0.049)	(0.223)	(0.209)	(0.057)	(0.054)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	-0.090**	-0.099**	-0.359*	-0.384**	-0.093*	-0.100**
	(0.045)	(0.044)	(0.191)	(0.190)	(0.049)	(0.049)

How interested would you say you are in politics? (1 if Interested)	-0.086**	-0.090**	-0.387**	-0.390**	-0.101**	-0.102**
	(0.041)	(0.041)	(0.169)	(0.168)	(0.044)	(0.044)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.217***	-0.223***	-0.731***	-0.741***	-0.190***	-0.194***
	(0.056)	(0.056)	(0.168)	(0.167)	(0.044)	(0.044)
What is your primary source of drinking water?						
Municipal water tank (vs. Municipal piped water)	-0.026	-0.025	-0.105	-0.108	-0.032	-0.034
	(0.087)	(0.087)	(0.282)	(0.279)	(0.088)	(0.089)
Private well (vs. Municipal piped water)	-0.055	-0.065	-0.235	-0.286	-0.069	-0.084
	(0.085)	(0.084)	(0.285)	(0.282)	(0.088)	(0.088)
Private motor (vs. Municipal piped water)	-0.108	-0.120	-0.521*	-0.548*	-0.134	-0.144*
	(0.085)	(0.084)	(0.304)	(0.302)	(0.087)	(0.087)
Hand pump (vs. Municipal piped water)	-0.085	-0.093	-0.364	-0.385	-0.101	-0.108
	(0.092)	(0.091)	(0.333)	(0.330)	(0.095)	(0.095)
Harvest rain water (vs. Municipal piped water)	-0.035	-0.014	-0.181	-0.148	-0.054	-0.046
	(0.246)	(0.247)	(0.737)	(0.745)	(0.208)	(0.221)
Which if any of the following water purification methods do you use?						
Boiling (vs. None)	0.071	0.093*	0.243	0.335	0.064	0.090
	(0.056)	(0.056)	(0.225)	(0.224)	(0.062)	(0.064)
Chlorine tablets (vs. None)	0.048	0.060	0.179	0.249	0.046	0.064
	(0.066)	(0.067)	(0.229)	(0.231)	(0.060)	(0.061)
Filter (vs. None)	0.074	0.081	0.261	0.306	0.069	0.081
	(0.080)	(0.080)	(0.263)	(0.263)	(0.074)	(0.075)
Other (vs. None)	0.026	0.032	0.145	0.192	0.037	0.048
	(0.123)	(0.124)	(0.434)	(0.441)	(0.116)	(0.120)
Which of the following health conditions have a member of your household suffered from over the last 6 months?						
Diarrhea (vs. None of the above)	0.039	0.041	0.327	0.343	0.079	0.084
	(0.082)	(0.083)	(0.324)	(0.324)	(0.078)	(0.080)
Stomach ache (vs. None of the above)	-0.007	-0.011	0.202	0.188	0.046	0.043
	(0.060)	(0.060)	(0.294)	(0.294)	(0.065)	(0.065)
Vomiting (vs. None of the above)	-0.019	-0.032	0.169	0.138	0.038	0.030
	(0.062)	(0.061)	(0.287)	(0.286)	(0.062)	(0.062)
Fever (vs. None of the above)	0.041	0.044	0.373	0.382	0.092	0.096*
	(0.048)	(0.048)	(0.256)	(0.255)	(0.057)	(0.057)
Which of the following health conditions have a child under age 5 of your household suffered from over the last 6 months?						
Diarrhea (vs. None of the above)	0.017	0.026	-0.027	-0.026	-0.008	-0.008
	(0.087)	(0.086)	(0.340)	(0.333)	(0.104)	(0.106)
Stomach ache (vs. None of the above)	0.060	0.046	0.076	0.003	0.024	0.001
	(0.091)	(0.090)	(0.336)	(0.334)	(0.105)	(0.107)
Vomiting (vs. None of the above)	-0.054	-0.063	-0.297	-0.355	-0.081	-0.099
	(0.072)	(0.071)	(0.304)	(0.301)	(0.091)	(0.093)
Fever (vs. None of the above)	-0.063	-0.071	-0.350	-0.403	-0.094	-0.110
	(0.071)	(0.070)	(0.305)	(0.303)	(0.090)	(0.092)
Constant	0.396***	0.394***	-0.339	-0.351		
	(0.134)	(0.132)	(0.492)	(0.486)		
Observations	569	569	568	568	568	568
R-squared	0.182	0.175				

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 3. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: I am satisfied with the quality of the services provided by the political administration (1 if Agree).

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) OLS
Number of solar street lights per household	0.293***			0.316***	
	(0.068)			(0.069)	
Solar street lights installed (1 if Yes)		0.115***			0.293***
		(0.030)			(0.095)
Drinking water improvements in process of installation (1 if Yes)			0.076**	0.087***	-0.186**
			(0.031)	(0.030)	(0.095)
Age - 26-35 (vs. 18-25)	-0.110***	-0.081**	-0.078**	-0.111***	-0.083**
	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
Age - 36-45 (vs. 18-25)	-0.128**	-0.118**	-0.110**	-0.142**	-0.120**
	(0.055)	(0.055)	(0.055)	(0.055)	(0.055)
Age - 46-55 (vs. 18-25)	-0.104	-0.071	-0.052	-0.120	-0.090
	(0.085)	(0.087)	(0.089)	(0.085)	(0.085)
Age - 56-65 (vs. 18-25)	-0.144	-0.084	-0.062	-0.146	-0.121
	(0.195)	(0.180)	(0.180)	(0.187)	(0.190)
Age - 66-75 (vs. 18-25)	-0.337***	-0.391***	-0.366***	-0.389***	-0.388***
	(0.091)	(0.089)	(0.089)	(0.092)	(0.090)
Male (vs. Female)	0.055	0.069	0.066	0.060	0.069
	(0.046)	(0.045)	(0.045)	(0.046)	(0.045)
Married (vs. Single)	0.099**	0.116**	0.112**	0.106**	0.118**
	(0.050)	(0.050)	(0.050)	(0.049)	(0.050)
Number of children living with you	-0.003	-0.007	-0.006	-0.003	-0.007
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Years of education	0.006*	0.006*	0.006*	0.006*	0.006*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Profession - Private employee (vs. Jobless)	-0.053	-0.030	-0.016	-0.049	-0.057
	(0.078)	(0.071)	(0.071)	(0.076)	(0.077)
Profession - Government employee (vs. Jobless)	-0.051	-0.026	-0.020	-0.055	-0.032
	(0.044)	(0.046)	(0.047)	(0.044)	(0.045)
Profession - Agriculture (vs. Jobless)	0.043	0.040	0.033	0.052	0.041
	(0.060)	(0.058)	(0.058)	(0.060)	(0.059)
Profession - Self-employed (vs. Jobless)	0.118*	0.126**	0.127**	0.121*	0.126**
	(0.062)	(0.059)	(0.059)	(0.062)	(0.060)
Profession - Housewife (vs. Jobless)	0.029	0.005	0.013	0.002	0.012
	(0.057)	(0.057)	(0.057)	(0.057)	(0.057)
Profession - Student (vs. Jobless)	-0.037	-0.062	-0.055	-0.046	-0.064
	(0.060)	(0.056)	(0.057)	(0.059)	(0.056)
Own a vehicle (vs. Do not own)	0.160**	0.129**	0.130**	0.150**	0.134**
	(0.066)	(0.064)	(0.065)	(0.065)	(0.063)
Own a home (vs. Do not own)	0.118**	0.147***	0.151***	0.113**	0.147***
	(0.049)	(0.046)	(0.047)	(0.049)	(0.046)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.128***	0.128***	0.127***	0.133***	0.126***
	(0.046)	(0.043)	(0.043)	(0.046)	(0.043)
How interested would you say you are in politics? (1 if Interested)	-0.065	-0.055	-0.056	-0.062	-0.053
	(0.041)	(0.038)	(0.038)	(0.041)	(0.039)
How much violence have you or a member of your family	-0.009	-0.005	-0.016	0.003	0.005

witnessed over the past year? (1 if Not much)	(0.038)	(0.038)	(0.037)	(0.038)	(0.038)
Constant	0.004	-0.082	-0.049	-0.054	-0.087
	(0.071)	(0.072)	(0.071)	(0.071)	(0.072)
Observations	574	619	619	574	619
R-squared	0.140	0.136	0.127	0.151	0.143

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 4. Estimated Probit coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: I am satisfied with the quality of the services provided by the political administration (1 if Agree).

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Probit	(5) Probit
Number of solar street lights per household	1.017***			1.193***	
	(0.265)			(0.278)	
Solar street lights installed (1 if Yes)		0.574***			1.183***
		(0.148)			(0.324)
Drinking water improvements in process of installation (1 if Yes)			0.376***	0.471***	-0.634**
			(0.141)	(0.150)	(0.308)
Age - 26-35 (vs. 18-25)	-0.611***	-0.449**	-0.423**	-0.641***	-0.459**
	(0.192)	(0.190)	(0.187)	(0.197)	(0.190)
Age - 36-45 (vs. 18-25)	-0.701***	-0.622**	-0.558**	-0.807***	-0.647**
	(0.265)	(0.257)	(0.253)	(0.273)	(0.259)
Age - 46-55 (vs. 18-25)	-0.547	-0.407	-0.286	-0.670*	-0.500
	(0.363)	(0.344)	(0.348)	(0.360)	(0.347)
Age - 56-65 (vs. 18-25)	-0.601	-0.421	-0.322	-0.683	-0.522
	(0.702)	(0.673)	(0.682)	(0.677)	(0.687)
Male (vs. Female)	0.225	0.314	0.299	0.270	0.307
	(0.230)	(0.227)	(0.223)	(0.234)	(0.227)
Married (vs. Single)	0.479*	0.525**	0.509**	0.514**	0.532**
	(0.246)	(0.238)	(0.237)	(0.242)	(0.241)
Number of children living with you	0.001	-0.018	-0.021	0.003	-0.018
	(0.050)	(0.048)	(0.047)	(0.051)	(0.049)
Years of education	0.030**	0.026*	0.027**	0.027*	0.026*
	(0.015)	(0.014)	(0.014)	(0.015)	(0.014)
Profession - Private employee (vs. Jobless)	-0.201	-0.162	-0.101	-0.195	-0.272
	(0.395)	(0.362)	(0.358)	(0.382)	(0.395)
Profession - Government employee (vs. Jobless)	-0.270	-0.138	-0.083	-0.326	-0.183
	(0.251)	(0.226)	(0.224)	(0.255)	(0.229)
Profession - Agriculture (vs. Jobless)	0.228	0.226	0.179	0.293	0.239
	(0.266)	(0.265)	(0.263)	(0.270)	(0.264)
Profession - Self-employed (vs. Jobless)	0.479**	0.482**	0.481**	0.494**	0.480**
	(0.234)	(0.226)	(0.221)	(0.240)	(0.228)
Profession - Housewife (vs. Jobless)	0.147	0.016	0.062	-0.009	0.036
	(0.282)	(0.273)	(0.273)	(0.283)	(0.275)
Profession - Student (vs. Jobless)	-0.152	-0.261	-0.218	-0.216	-0.275
	(0.244)	(0.238)	(0.242)	(0.242)	(0.233)
Own a vehicle (vs. Do not own)	0.619***	0.459**	0.455**	0.581***	0.489**
	(0.219)	(0.206)	(0.205)	(0.222)	(0.207)
Own a home (vs. Do not own)	0.435**	0.539***	0.557***	0.420**	0.531***
	(0.176)	(0.165)	(0.165)	(0.177)	(0.165)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.555***	0.550***	0.536***	0.595***	0.546***
	(0.181)	(0.174)	(0.172)	(0.187)	(0.175)
How interested would you say you are in politics? (1 if Interested)	-0.234	-0.175	-0.188	-0.210	-0.169
	(0.169)	(0.158)	(0.156)	(0.171)	(0.159)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.002	0.043	-0.023	0.076	0.090
	(0.187)	(0.183)	(0.180)	(0.190)	(0.188)

Constant	-1.819***	-2.276***	-2.083***	-2.189***	-2.300***
	(0.346)	(0.364)	(0.354)	(0.361)	(0.367)
Observations	573	618	618	573	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 5. Estimated Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: I am satisfied with the quality of the services provided by the political administration (1 if Agree).

VARIABLES	(1) Marginal Effect	(2) Marginal Effect	(3) Marginal Effect	(4) Marginal Effect	(5) Marginal Effect
Number of solar street lights per household	0.220***			0.251***	
	(0.058)			(0.059)	
Solar street lights installed (1 if Yes)		0.128***			0.262***
		(0.033)			(0.072)
Drinking water improvements in process of installation (1 if Yes)			0.085***	0.099***	-0.141**
			(0.032)	(0.031)	(0.068)
Age - 26-35 (vs. 18-25)	-0.145***	-0.109**	-0.102**	-0.151***	-0.112**
	(0.048)	(0.047)	(0.047)	(0.048)	(0.048)
Age - 36-45 (vs. 18-25)	-0.159***	-0.138***	-0.126**	-0.175***	-0.143***
	(0.055)	(0.053)	(0.054)	(0.054)	(0.054)
Age - 46-55 (vs. 18-25)	-0.134*	-0.101	-0.074	-0.156**	-0.119
	(0.077)	(0.077)	(0.084)	(0.071)	(0.073)
Age - 56-65 (vs. 18-25)	-0.143	-0.103	-0.082	-0.157	-0.123
	(0.124)	(0.135)	(0.150)	(0.111)	(0.125)
Male (vs. Female)	0.049	0.070	0.068	0.057	0.068
	(0.050)	(0.050)	(0.050)	(0.049)	(0.050)
Married (vs. Single)	0.104**	0.117**	0.115**	0.108**	0.118**
	(0.053)	(0.053)	(0.053)	(0.051)	(0.053)
Number of children living with you	0.000	-0.004	-0.005	0.001	-0.004
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Years of education	0.007**	0.006*	0.006**	0.006*	0.006*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Profession - Private employee (vs. Jobless)	-0.037	-0.032	-0.021	-0.037	-0.051
	(0.067)	(0.068)	(0.071)	(0.066)	(0.066)
Profession - Government employee (vs. Jobless)	-0.047	-0.028	-0.017	-0.056	-0.036
	(0.043)	(0.045)	(0.046)	(0.042)	(0.045)
Profession - Agriculture (vs. Jobless)	0.053	0.055	0.042	0.072	0.059
	(0.065)	(0.068)	(0.065)	(0.070)	(0.068)
Profession - Self-employed (vs. Jobless)	0.126*	0.133**	0.132**	0.133*	0.132**
	(0.065)	(0.065)	(0.063)	(0.068)	(0.066)
Profession - Housewife (vs. Jobless)	0.033	0.004	0.014	-0.002	0.008
	(0.064)	(0.060)	(0.061)	(0.059)	(0.062)
Profession - Student (vs. Jobless)	-0.029	-0.049	-0.042	-0.040	-0.051
	(0.045)	(0.043)	(0.045)	(0.043)	(0.043)
Own a vehicle (vs. Do not own)	0.134***	0.102**	0.103**	0.122***	0.108**
	(0.048)	(0.046)	(0.047)	(0.047)	(0.046)
Own a home (vs. Do not own)	0.094**	0.120***	0.126***	0.088**	0.118***
	(0.038)	(0.036)	(0.037)	(0.037)	(0.036)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.120***	0.123***	0.122***	0.125***	0.121***
	(0.039)	(0.038)	(0.038)	(0.038)	(0.038)
How interested would you say you are in politics? (1 if Interested)	-0.051	-0.039	-0.043	-0.044	-0.037
	(0.036)	(0.035)	(0.035)	(0.036)	(0.035)
How much violence have you or a member of your	-0.001	0.010	-0.005	0.016	0.020

family witnessed over the past year? (1 if Not much)	(0.041)	(0.041)	(0.041)	(0.040)	(0.042)
Observations	573	618	618	573	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 6. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Confidence in the Government of Islamabad (1 if Confident).

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) OLS
Number of solar street lights per household	0.336***			0.349***	
	(0.111)			(0.110)	
Solar street lights installed in the neighborhood (1 if Yes)		0.074**			0.331**
		(0.038)			(0.134)
Drinking water improvements in process of installation (1 if Yes)			0.027	0.049	-0.269**
			(0.038)	(0.039)	(0.132)
Age - 26-35 (vs. 18-25)	0.060	0.053	0.055	0.060	0.050
	(0.051)	(0.049)	(0.049)	(0.051)	(0.049)
Age - 36-45 (vs. 18-25)	0.025	0.016	0.025	0.017	0.013
	(0.066)	(0.065)	(0.065)	(0.067)	(0.065)
Age - 46-55 (vs. 18-25)	-0.049	-0.001	0.013	-0.059	-0.030
	(0.093)	(0.094)	(0.095)	(0.093)	(0.091)
Age - 56-65 (vs. 18-25)	-0.052	0.020	0.032	-0.053	-0.033
	(0.137)	(0.171)	(0.174)	(0.145)	(0.131)
Age - 66-75 (vs. 18-25)	-0.232**	-0.271***	-0.243**	-0.261***	-0.268***
	(0.095)	(0.098)	(0.097)	(0.101)	(0.098)
Male (vs. Female)	-0.074	-0.058	-0.062	-0.071	-0.059
	(0.070)	(0.066)	(0.066)	(0.071)	(0.066)
Married (vs. Single)	0.076	0.101*	0.097	0.080	0.104*
	(0.063)	(0.061)	(0.061)	(0.062)	(0.061)
Number of children living with you	-0.009	-0.012	-0.012	-0.009	-0.013
	(0.013)	(0.012)	(0.012)	(0.013)	(0.013)
Years of education	-0.007*	-0.005	-0.005	-0.007*	-0.005
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	-0.027	0.015	0.022	-0.025	-0.026
	(0.114)	(0.111)	(0.111)	(0.114)	(0.115)
Profession - Government employee (vs. Jobless)	0.067	0.080	0.085	0.065	0.071
	(0.064)	(0.064)	(0.064)	(0.064)	(0.062)
Profession - Agriculture (vs. Jobless)	0.006	0.005	-0.002	0.011	0.007
	(0.070)	(0.068)	(0.068)	(0.070)	(0.068)
Profession - Self-employed (vs. Jobless)	-0.025	-0.016	-0.016	-0.023	-0.017
	(0.058)	(0.057)	(0.057)	(0.058)	(0.056)
Profession - Housewife (vs. Jobless)	0.059	0.033	0.045	0.043	0.043
	(0.081)	(0.078)	(0.079)	(0.082)	(0.079)
Profession - Student (vs. Jobless)	0.037	0.027	0.034	0.032	0.024
	(0.061)	(0.058)	(0.057)	(0.061)	(0.059)
Own a vehicle (vs. Do not own)	0.171**	0.130**	0.133**	0.165**	0.138**
	(0.069)	(0.064)	(0.065)	(0.069)	(0.063)
Own a home (vs. Do not own)	-0.026	-0.011	-0.007	-0.029	-0.011
	(0.040)	(0.041)	(0.041)	(0.040)	(0.039)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	-0.215***	-0.201***	-0.202***	-0.212***	-0.204***
	(0.043)	(0.040)	(0.040)	(0.043)	(0.040)
How interested would you say you are in politics? (1 if Interested)	-0.012	-0.013	-0.015	-0.010	-0.011
	(0.040)	(0.037)	(0.037)	(0.040)	(0.037)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.128**	-0.136**	-0.146***	-0.122**	-0.121**
	(0.057)	(0.056)	(0.056)	(0.058)	(0.056)

Constant	0.451***	0.396***	0.432***	0.418***	0.388***
	(0.099)	(0.098)	(0.096)	(0.101)	(0.098)
Observations	574	619	619	574	619
R-squared	0.178	0.153	0.149	0.180	0.164

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 7. Estimated Probit coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Confidence in the Government of Islamabad (1 if Confident).

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Probit	(5) Probit
Number of solar street lights per household	1.163***			1.276***	
	(0.313)			(0.314)	
Solar street lights installed in the neighborhood (1 if Yes)		0.328**			1.142***
		(0.133)			(0.361)
Drinking water improvements in process of installation (1 if Yes)			0.116	0.254*	-0.859**
			(0.131)	(0.136)	(0.349)
Age - 26-35 (vs. 18-25)	0.215	0.202	0.203	0.225	0.194
	(0.164)	(0.158)	(0.157)	(0.166)	(0.159)
Age - 36-45 (vs. 18-25)	0.109	0.102	0.126	0.090	0.090
	(0.226)	(0.220)	(0.219)	(0.228)	(0.222)
Age - 46-55 (vs. 18-25)	-0.194	0.042	0.102	-0.231	-0.087
	(0.371)	(0.343)	(0.343)	(0.367)	(0.349)
Age - 56-65 (vs. 18-25)	-0.164	0.147	0.199	-0.130	-0.119
	(0.566)	(0.650)	(0.656)	(0.588)	(0.566)
Male (vs. Female)	-0.253	-0.206	-0.202	-0.257	-0.213
	(0.203)	(0.194)	(0.195)	(0.202)	(0.197)
Married (vs. Single)	0.292	0.407*	0.378*	0.325	0.424**
	(0.216)	(0.210)	(0.207)	(0.218)	(0.215)
Number of children living with you	-0.032	-0.049	-0.045	-0.038	-0.054
	(0.044)	(0.043)	(0.043)	(0.045)	(0.044)
Years of education	-0.026**	-0.019	-0.017	-0.028**	-0.020
	(0.013)	(0.012)	(0.012)	(0.013)	(0.013)
Profession - Private employee (vs. Jobless)	-0.049	0.101	0.120	-0.030	-0.040
	(0.343)	(0.333)	(0.330)	(0.345)	(0.347)
Profession - Government employee (vs. Jobless)	0.196	0.272	0.282	0.193	0.225
	(0.196)	(0.195)	(0.194)	(0.198)	(0.191)
Profession - Agriculture (vs. Jobless)	0.013	0.011	-0.014	0.036	0.009
	(0.247)	(0.235)	(0.233)	(0.248)	(0.242)
Profession - Self-employed (vs. Jobless)	-0.083	-0.036	-0.039	-0.062	-0.045
	(0.240)	(0.223)	(0.222)	(0.241)	(0.225)
Profession - Housewife (vs. Jobless)	0.192	0.089	0.139	0.120	0.116
	(0.235)	(0.231)	(0.232)	(0.239)	(0.234)
Profession - Student (vs. Jobless)	0.112	0.070	0.094	0.098	0.045
	(0.261)	(0.242)	(0.238)	(0.263)	(0.252)
Own a vehicle (vs. Do not own)	0.601***	0.421**	0.429**	0.575**	0.471**
	(0.222)	(0.212)	(0.210)	(0.226)	(0.209)
Own a home (vs. Do not own)	-0.130	-0.029	0.000	-0.163	-0.035
	(0.195)	(0.176)	(0.178)	(0.193)	(0.179)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	-0.855***	-0.775***	-0.768***	-0.854***	-0.802***
	(0.179)	(0.158)	(0.157)	(0.180)	(0.163)
How interested would you say you are in politics? (1 if Interested)	-0.023	-0.015	-0.023	-0.014	-0.008
	(0.156)	(0.140)	(0.138)	(0.156)	(0.144)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.391**	-0.396**	-0.434***	-0.360**	-0.354**
	(0.159)	(0.154)	(0.153)	(0.159)	(0.155)
Constant	-0.134	-0.409	-0.256	-0.303	-0.411

	(0.313)	(0.311)	(0.303)	(0.320)	(0.311)
Observations	573	618	618	573	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 8. Estimated Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Confidence in the Government of Islamabad (1 if Confident).

VARIABLES	(1) Marginal effect	(2) Marginal effect	(3) Marginal effect	(4) Marginal effect	(5) Marginal effect
Number of solar street lights per household	0.354***			0.386***	
	(0.095)			(0.095)	
Solar street lights installed in the neighborhood (1 if Yes)		0.099**			0.341***
		(0.040)			(0.108)
Drinking water improvements in process of installation (1 if Yes)			0.035	0.077*	-0.256**
			(0.040)	(0.041)	(0.104)
Age - 26-35 (vs. 18-25)	0.067	0.061	0.062	0.069	0.059
	(0.050)	(0.047)	(0.047)	(0.050)	(0.047)
Age - 36-45 (vs. 18-25)	0.032	0.030	0.037	0.026	0.026
	(0.068)	(0.065)	(0.065)	(0.067)	(0.065)
Age - 46-55 (vs. 18-25)	-0.051	0.012	0.030	-0.059	-0.023
	(0.092)	(0.098)	(0.102)	(0.088)	(0.091)
Age - 56-65 (vs. 18-25)	-0.044	0.043	0.060	-0.035	-0.032
	(0.141)	(0.202)	(0.211)	(0.150)	(0.143)
Male (vs. Female)	-0.077	-0.062	-0.061	-0.078	-0.064
	(0.062)	(0.059)	(0.059)	(0.061)	(0.059)
Married (vs. Single)	0.089	0.123*	0.115*	0.098	0.126**
	(0.066)	(0.063)	(0.063)	(0.066)	(0.064)
Number of children living with you	-0.010	-0.015	-0.014	-0.011	-0.016
	(0.014)	(0.013)	(0.013)	(0.014)	(0.013)
Years of education	-0.008**	-0.006	-0.005	-0.008**	-0.006
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	-0.014	0.030	0.036	-0.008	-0.011
	(0.095)	(0.101)	(0.102)	(0.097)	(0.096)
Profession - Government employee (vs. Jobless)	0.060	0.085	0.089	0.060	0.069
	(0.061)	(0.063)	(0.062)	(0.062)	(0.060)
Profession - Agriculture (vs. Jobless)	0.004	0.003	-0.004	0.011	0.003
	(0.071)	(0.067)	(0.066)	(0.073)	(0.069)
Profession - Self-employed (vs. Jobless)	-0.023	-0.010	-0.011	-0.017	-0.012
	(0.065)	(0.062)	(0.062)	(0.067)	(0.062)
Profession - Housewife (vs. Jobless)	0.059	0.026	0.042	0.036	0.034
	(0.073)	(0.068)	(0.070)	(0.073)	(0.070)
Profession - Student (vs. Jobless)	0.033	0.020	0.028	0.029	0.013
	(0.080)	(0.072)	(0.071)	(0.080)	(0.073)
Own a vehicle (vs. Do not own)	0.183***	0.127**	0.131**	0.174**	0.140**
	(0.067)	(0.064)	(0.063)	(0.068)	(0.062)
Own a home (vs. Do not own)	-0.040	-0.009	0.000	-0.049	-0.010
	(0.059)	(0.053)	(0.054)	(0.058)	(0.053)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	-0.260***	-0.234***	-0.234***	-0.258***	-0.239***
	(0.053)	(0.047)	(0.047)	(0.053)	(0.048)
How interested would you say you are in politics? (1 if Interested)	-0.007	-0.005	-0.007	-0.004	-0.002
	(0.048)	(0.042)	(0.042)	(0.047)	(0.043)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.119**	-0.119**	-0.132***	-0.109**	-0.106**

	(0.049)	(0.047)	(0.047)	(0.049)	(0.047)
Observations	573	618	618	573	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 9. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: All things considered, how satisfied are you with your life as a whole these days? (1 if Satisfied)

VARIABLES	(1) OLS	(2) OLS	(3) OLS
Number of solar street lights per household	-0.029		
	(0.073)		
Solar street lights installed in the neighborhood (1 if Yes)		-0.062*	
		(0.037)	
Drinking water improvements in process of installation (1 if Yes)			-0.056
			(0.036)
Age - 26-35 (vs. 18-25)	-0.010	-0.003	-0.004
	(0.041)	(0.040)	(0.040)
Age - 36-45 (vs. 18-25)	0.032	0.015	0.013
	(0.065)	(0.065)	(0.064)
Age - 46-55 (vs. 18-25)	0.028	0.039	0.031
	(0.090)	(0.086)	(0.086)
Age - 56-65 (vs. 18-25)	-0.099	-0.097	-0.110
	(0.214)	(0.222)	(0.231)
Age - 66-75 (vs. 18-25)	-0.712***	-0.672***	-0.676***
	(0.106)	(0.106)	(0.107)
Male (vs. Female)	-0.099**	-0.121***	-0.120***
	(0.047)	(0.046)	(0.046)
Married (vs. Single)	0.147***	0.154***	0.155***
	(0.057)	(0.055)	(0.055)
Number of children living with you	-0.016	-0.017	-0.018
	(0.012)	(0.011)	(0.011)
Years of education	-0.016***	-0.014***	-0.014***
	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	-0.074	-0.050	-0.059
	(0.106)	(0.107)	(0.108)
Profession - Government employee (vs. Jobless)	0.132***	0.147***	0.145***
	(0.049)	(0.049)	(0.048)
Profession - Agriculture (vs. Jobless)	-0.042	-0.039	-0.038
	(0.069)	(0.070)	(0.070)
Profession - Self-employed (vs. Jobless)	-0.288***	-0.267***	-0.267***
	(0.071)	(0.068)	(0.068)
Profession - Housewife (vs. Jobless)	-0.004	0.014	0.014
	(0.060)	(0.060)	(0.060)
Profession - Student (vs. Jobless)	0.090	0.102	0.100
	(0.070)	(0.068)	(0.067)
Own a vehicle (vs. Do not own)	0.075	0.059	0.060
	(0.061)	(0.057)	(0.058)
Own a home (vs. Do not own)	0.066	0.083	0.082
	(0.057)	(0.054)	(0.054)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.173***	0.190***	0.189***
	(0.061)	(0.059)	(0.059)
How interested would you say you are in politics? (1 if Interested)	-0.098*	-0.110**	-0.110**
	(0.050)	(0.048)	(0.048)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.033	-0.052	-0.048
	(0.044)	(0.044)	(0.044)
Constant	0.847***	0.885***	0.877***

	(0.078)	(0.081)	(0.081)
Observations	574	619	619
R-squared	0.167	0.173	0.173

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 10. Estimated Probit coefficients and Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: All things considered, how satisfied are you with your life as a whole these days? (1 if Satisfied)

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Marginal Effects	(5) Marginal Effects	(6) Marginal Effects
Number of solar street lights per household	-0.141			-0.039		
	(0.273)			(0.076)		
Solar street lights installed in the neighborhood (1 if Yes)		-0.220*			-0.062*	
		(0.132)			(0.038)	
Drinking water improvements in process of installation (1 if Yes)			-0.189			-0.054
			(0.128)			(0.036)
Age - 26-35 (vs. 18-25)	-0.044	-0.019	-0.025	-0.012	-0.005	-0.007
	(0.159)	(0.152)	(0.152)	(0.045)	(0.044)	(0.043)
Age - 36-45 (vs. 18-25)	0.096	0.038	0.029	0.026	0.011	0.008
	(0.251)	(0.243)	(0.241)	(0.067)	(0.068)	(0.067)
Age - 46-55 (vs. 18-25)	0.110	0.151	0.122	0.029	0.040	0.033
	(0.378)	(0.362)	(0.360)	(0.098)	(0.093)	(0.094)
Age - 56-65 (vs. 18-25)	-0.336	-0.347	-0.415	-0.107	-0.112	-0.136
	(0.794)	(0.830)	(0.848)	(0.277)	(0.294)	(0.308)
Male (vs. Female)	-0.459**	-0.548***	-0.540***	-0.128**	-0.155***	-0.153***
	(0.217)	(0.207)	(0.207)	(0.060)	(0.058)	(0.058)
Married (vs. Single)	0.514**	0.531***	0.536***	0.144**	0.150***	0.152***
	(0.210)	(0.203)	(0.203)	(0.059)	(0.058)	(0.057)
Number of children living with you	-0.061	-0.065	-0.064	-0.017	-0.018	-0.018
	(0.047)	(0.046)	(0.045)	(0.013)	(0.013)	(0.013)
Years of education	-0.054***	-0.048***	-0.048***	-0.015***	-0.014***	-0.014***
	(0.013)	(0.013)	(0.013)	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	-0.249	-0.172	-0.205	-0.076	-0.053	-0.064
	(0.320)	(0.324)	(0.328)	(0.104)	(0.105)	(0.108)
Profession - Government employee (vs. Jobless)	0.572***	0.615***	0.606***	0.120***	0.134***	0.132***
	(0.221)	(0.210)	(0.208)	(0.044)	(0.044)	(0.044)
Profession - Agriculture (vs. Jobless)	-0.155	-0.132	-0.127	-0.046	-0.041	-0.039
	(0.228)	(0.223)	(0.222)	(0.069)	(0.069)	(0.069)
Profession - Self-employed (vs. Jobless)	-0.837***	-0.771***	-0.773***	-0.297***	-0.277***	-0.278***
	(0.211)	(0.202)	(0.202)	(0.076)	(0.073)	(0.073)
Profession - Housewife (vs. Jobless)	-0.033	0.027	0.029	-0.009	0.008	0.008
	(0.260)	(0.251)	(0.251)	(0.074)	(0.072)	(0.072)
Profession - Student (vs. Jobless)	0.278	0.321	0.311	0.068	0.081	0.079
	(0.225)	(0.219)	(0.218)	(0.053)	(0.053)	(0.053)
Own a vehicle (vs. Do not own)	0.235	0.202	0.203	0.066	0.057	0.058
	(0.236)	(0.225)	(0.227)	(0.066)	(0.064)	(0.064)
Own a home (vs. Do not own)	0.252	0.318*	0.316*	0.071	0.090*	0.090*

	(0.189)	(0.179)	(0.179)	(0.053)	(0.051)	(0.051)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.483***	0.539***	0.535***	0.135***	0.153***	0.152***
	(0.188)	(0.181)	(0.181)	(0.052)	(0.050)	(0.051)
How interested would you say you are in politics? (1 if Interested)	-0.264	-0.304**	-0.300*	-0.074	-0.086**	-0.085*
	(0.162)	(0.154)	(0.154)	(0.045)	(0.044)	(0.043)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.062	-0.126	-0.105	-0.017	-0.036	-0.030
	(0.167)	(0.168)	(0.166)	(0.047)	(0.047)	(0.047)
Constant	1.165***	1.299***	1.252***			
	(0.320)	(0.328)	(0.324)			
Observations	573	618	618	573	618	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 11. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: How proud are you to be a Pakistani? (1 if Proud)

VARIABLES	(1) OLS	(2) OLS	(3) OLS
Number of solar street lights per household	0.071		
	(0.049)		
Solar street lights installed in the neighborhood (1 if Yes)		0.055	
		(0.035)	
Drinking water improvements in process of installation (1 if Yes)			0.050
			(0.034)
Age - 26-35 (vs. 18-25)	-0.097**	-0.085**	-0.084**
	(0.043)	(0.042)	(0.042)
Age - 36-45 (vs. 18-25)	-0.126**	-0.133**	-0.131**
	(0.061)	(0.061)	(0.061)
Age - 46-55 (vs. 18-25)	-0.130	-0.101	-0.094
	(0.091)	(0.090)	(0.090)
Age - 56-65 (vs. 18-25)	-0.084	-0.053	-0.042
	(0.154)	(0.148)	(0.141)
Age - 66-75 (vs. 18-25)	0.289***	0.267***	0.271***
	(0.094)	(0.098)	(0.098)
Male (vs. Female)	-0.051	-0.037	-0.038
	(0.052)	(0.050)	(0.051)
Married (vs. Single)	0.056	0.067	0.065
	(0.057)	(0.055)	(0.055)
Number of children living with you	0.003	-0.001	-0.001
	(0.011)	(0.011)	(0.011)
Years of education	-0.005	-0.004	-0.004
	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	0.049	0.051	0.059
	(0.116)	(0.115)	(0.116)
Profession - Government employee (vs. Jobless)	0.093*	0.091*	0.093**
	(0.048)	(0.046)	(0.047)
Profession - Agriculture (vs. Jobless)	-0.048	-0.042	-0.044
	(0.071)	(0.072)	(0.071)
Profession - Self-employed (vs. Jobless)	-0.085	-0.109*	-0.109*
	(0.068)	(0.065)	(0.064)
Profession - Housewife (vs. Jobless)	-0.021	-0.035	-0.035
	(0.066)	(0.065)	(0.065)
Profession - Student (vs. Jobless)	0.046	0.023	0.025
	(0.063)	(0.062)	(0.061)
Own a vehicle (vs. Do not own)	0.060	0.052	0.051
	(0.060)	(0.056)	(0.056)
Own a home (vs. Do not own)	-0.095**	-0.090**	-0.089**
	(0.047)	(0.045)	(0.045)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.105**	0.094*	0.094*
	(0.053)	(0.051)	(0.051)
How interested would you say you are in politics? (1 if Interested)	0.100**	0.119**	0.118**
	(0.048)	(0.047)	(0.047)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	0.497***	0.491***	0.487***
	(0.053)	(0.052)	(0.052)
Constant	0.358***	0.312***	0.319***
	(0.087)	(0.087)	(0.086)

Observations	574	619	619
R-squared	0.232	0.221	0.221

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 12. Estimated Probit coefficients and Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: How proud are you to be a Pakistani? (1 if Proud)

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Marginal Effects	(5) Marginal Effects	(6) Marginal Effects
Number of solar street lights per household	0.476			0.136		
	(0.331)			(0.095)		
Solar street lights installed in the neighborhood (1 if Yes)		0.218*			0.062*	
		(0.132)			(0.038)	
Drinking water improvements in process of installation (1 if Yes)			0.195			0.056
			(0.128)			(0.036)
Age - 26-35 (vs. 18-25)	-0.382**	-0.308*	-0.302*	-0.103**	-0.083*	-0.082*
	(0.166)	(0.163)	(0.162)	(0.043)	(0.042)	(0.043)
Age - 36-45 (vs. 18-25)	-0.466**	-0.474**	-0.468**	-0.130*	-0.137** (0.067)	-0.135**
	(0.230)	(0.224)	(0.224)	(0.067)	-0.111	(0.067)
Age - 46-55 (vs. 18-25)	-0.532	-0.396	-0.372	-0.152	(0.106)	-0.104
	(0.348)	(0.347)	(0.346)	(0.111)	-0.050	(0.105)
Age - 56-65 (vs. 18-25)	-0.414	-0.195	-0.120	-0.113	(0.177)	-0.030
	(0.662)	(0.640)	(0.621)	(0.209)	-0.037	(0.162)
Male (vs. Female)	-0.178	-0.130	-0.134	-0.051	(0.059)	-0.038
	(0.213)	(0.207)	(0.206)	(0.061)	0.071	(0.059)
Married (vs. Single)	0.207	0.249	0.244	0.059	(0.060)	0.070
	(0.217)	(0.209)	(0.209)	(0.062)	0.000	(0.060)
Number of children living with you	0.018	0.001	0.001	0.005	(0.012)	0.000
	(0.044)	(0.043)	(0.043)	(0.013)	-0.003	(0.012)
Years of education	-0.017	-0.012	-0.012	-0.005	(0.004)	-0.003
	(0.013)	(0.013)	(0.013)	(0.004)	0.036	(0.004)
Profession - Private employee (vs. Jobless)	0.125	0.133	0.169	0.035	(0.096)	0.046
	(0.376)	(0.368)	(0.372)	(0.101)	0.103**	(0.094)
Profession - Government employee (vs. Jobless)	0.431**	0.438**	0.443**	0.105**	(0.045)	0.105**
	(0.193)	(0.187)	(0.187)	(0.048)	-0.055	(0.045)
Profession - Agriculture (vs. Jobless)	-0.182	-0.179	-0.183	-0.057	(0.077)	-0.057
	(0.247)	(0.244)	(0.244)	(0.080)	-0.125*	(0.078)
Profession - Self-employed (vs. Jobless)	-0.298	-0.381*	-0.381*	-0.097	(0.072)	-0.126*
	(0.225)	(0.212)	(0.212)	(0.075)	-0.027	(0.072)
Profession - Housewife (vs. Jobless)	-0.033	-0.090	-0.089	-0.010	(0.075)	-0.027
	(0.254)	(0.248)	(0.248)	(0.076)	0.034	(0.075)
Profession - Student (vs. Jobless)	0.196	0.126	0.135	0.053	(0.067)	0.037
	(0.258)	(0.249)	(0.248)	(0.068)	0.051	(0.066)
Own a vehicle (vs. Do not own)	0.225	0.178	0.173	0.064	(0.064)	0.050
	(0.239)	(0.225)	(0.225)	(0.068)	-0.102**	(0.064)
Own a home (vs. Do not own)	-0.370**	-0.358**	-0.359**	-0.106**	(0.050) 0.102*	-0.103**
	(0.185)	(0.175)	(0.175)	(0.053)		(0.050)
How satisfied are you with the financial situation of	0.384**	0.355**	0.358**	0.110**		0.103**

your household? (1 if Satisfied)					*	
	(0.188)	(0.178)	(0.178)	(0.053)	(0.051)	(0.051)
How interested would you say you are in politics? (1 if Interested)	0.404**	0.475**	0.473**	0.116**	0.136**	0.136**
	(0.166)	(0.163)	(0.163)	(0.048)	(0.047)	(0.047)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	1.547**	1.525**	1.510**	0.443***	0.437**	0.433**
	(0.167)	(0.165)	(0.163)	(0.051)	(0.050)	(0.049)
Constant	-0.485	-0.663**	-0.635**			
	(0.317)	(0.323)	(0.319)			
Observations	573	618	618	573	618	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 13. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people? (1 if Most can be trusted)

VARIABLES	(1) OLS	(2) OLS	(3) OLS
Number of solar street lights per household	-0.126		
	(0.078)		
Solar street lights installed in the neighborhood (1 if Yes)		0.011	
		(0.042)	
Drinking water improvements in process of installation (1 if Yes)			0.012
			(0.041)
Age - 26-35 (vs. 18-25)	-0.035	-0.059	-0.059
	(0.049)	(0.048)	(0.048)
Age - 36-45 (vs. 18-25)	-0.183**	-0.194***	-0.194***
	(0.072)	(0.069)	(0.069)
Age - 46-55 (vs. 18-25)	-0.093	-0.144	-0.143
	(0.110)	(0.105)	(0.105)
Age - 56-65 (vs. 18-25)	-0.225	-0.272	-0.270
	(0.181)	(0.176)	(0.177)
Age - 66-75 (vs. 18-25)	0.460***	0.395***	0.395***
	(0.104)	(0.106)	(0.105)
Male (vs. Female)	0.020	0.033	0.033
	(0.055)	(0.053)	(0.053)
Married (vs. Single)	0.204***	0.171***	0.171***
	(0.066)	(0.063)	(0.063)
Number of children living with you	-0.016	-0.010	-0.010
	(0.014)	(0.013)	(0.013)
Years of education	-0.005	-0.005	-0.005
	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	0.305***	0.280***	0.282***
	(0.087)	(0.084)	(0.085)
Profession - Government employee (vs. Jobless)	0.207***	0.163***	0.164***
	(0.057)	(0.057)	(0.056)
Profession - Agriculture (vs. Jobless)	0.053	0.075	0.075
	(0.072)	(0.071)	(0.071)
Profession - Self-employed (vs. Jobless)	0.018	0.021	0.021
	(0.078)	(0.073)	(0.073)
Profession - Housewife (vs. Jobless)	0.075	0.075	0.074
	(0.070)	(0.070)	(0.070)
Profession - Student (vs. Jobless)	0.148*	0.093	0.093
	(0.076)	(0.073)	(0.073)
Own a vehicle (vs. Do not own)	0.063	0.074	0.073
	(0.072)	(0.070)	(0.070)
Own a home (vs. Do not own)	-0.114**	-0.123**	-0.123**
	(0.056)	(0.053)	(0.053)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	-0.125**	-0.116**	-0.116**
	(0.055)	(0.053)	(0.053)
How interested would you say you are in politics? (1 if Interested)	-0.105**	-0.150***	-0.151***
	(0.051)	(0.049)	(0.049)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.147***	-0.141***	-0.142***
	(0.049)	(0.049)	(0.048)
Constant	0.653***	0.663***	0.663***

	(0.093)	(0.095)	(0.095)
Observations	574	619	619
R-squared	0.224	0.224	0.224

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 14. Estimated Probit coefficients and Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people? (1 if Most can be trusted)

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Marginal Effects	(5) Marginal Effects	(6) Marginal Effects
Number of solar street lights per household	-0.478			-0.189		
	(0.296)			(0.117)		
Solar street lights installed in the neighborhood (1 if Yes)		0.053			0.021	
		(0.125)			(0.050)	
Drinking water improvements in process of installation (1 if Yes)			0.060			0.024
			(0.121)			(0.048)
Age - 26-35 (vs. 18-25)	-0.120	-0.197	-0.197	-0.046	-0.077	-0.077
	(0.154)	(0.149)	(0.149)	(0.060)	(0.058)	(0.058)
Age - 36-45 (vs. 18-25)	-0.564***	-0.604***	-0.605***	-0.222***	-0.237***	-0.237***
	(0.215)	(0.209)	(0.209)	(0.083)	(0.079)	(0.079)
Age - 46-55 (vs. 18-25)	-0.259	-0.440	-0.436	-0.102	-0.174	-0.172
	(0.320)	(0.312)	(0.310)	(0.126)	(0.122)	(0.121)
Age - 56-65 (vs. 18-25)	-0.656	-0.862	-0.844	-0.257	-0.330	-0.323
	(0.651)	(0.637)	(0.642)	(0.243)	(0.215)	(0.219)
Male (vs. Female)	0.044	0.104	0.105	0.018	0.042	0.042
	(0.184)	(0.176)	(0.176)	(0.073)	(0.070)	(0.070)
Married (vs. Single)	0.623***	0.521***	0.521***	0.246***	0.208***	0.207***
	(0.201)	(0.193)	(0.193)	(0.079)	(0.077)	(0.077)
Number of children living with you	-0.051	-0.029	-0.029	-0.020	-0.011	-0.011
	(0.043)	(0.041)	(0.041)	(0.017)	(0.016)	(0.016)
Years of education	-0.017	-0.015	-0.015	-0.007	-0.006	-0.006
	(0.012)	(0.012)	(0.012)	(0.005)	(0.005)	(0.005)
Profession - Private employee (vs. Jobless)	0.969***	0.879***	0.887***	0.353***	0.329***	0.332***
	(0.337)	(0.324)	(0.326)	(0.102)	(0.105)	(0.105)
Profession - Government employee (vs. Jobless)	0.698***	0.538***	0.540***	0.268***	0.211***	0.212***
	(0.192)	(0.181)	(0.181)	(0.070)	(0.069)	(0.069)
Profession - Agriculture (vs. Jobless)	0.154	0.222	0.222	0.061	0.088	0.088
	(0.209)	(0.209)	(0.208)	(0.083)	(0.083)	(0.083)
Profession - Self-employed (vs. Jobless)	0.080	0.083	0.084	0.032	0.033	0.033
	(0.209)	(0.198)	(0.198)	(0.083)	(0.079)	(0.078)
Profession - Housewife (vs. Jobless)	0.203	0.218	0.215	0.081	0.087	0.085
	(0.221)	(0.219)	(0.219)	(0.088)	(0.087)	(0.087)
Profession - Student (vs. Jobless)	0.466**	0.289	0.289	0.184**	0.115	0.115
	(0.228)	(0.219)	(0.219)	(0.087)	(0.087)	(0.086)
Own a vehicle (vs. Do not own)	0.174	0.220	0.219	0.069	0.088	0.087
	(0.226)	(0.216)	(0.216)	(0.089)	(0.086)	(0.086)
Own a home (vs. Do not own)	-0.311*	-0.349**	-0.349**	-0.123*	-0.139**	-0.139**
	(0.160)	(0.153)	(0.153)	(0.063)	(0.061)	(0.061)
How satisfied are you with the financial situation	-0.322**	-0.297**	-0.297**	-0.127**	-0.118**	-

of your household? (1 if Satisfied)						0.118**
	(0.150)	(0.143)	(0.144)	(0.059)	(0.057)	(0.057)
How interested would you say you are in politics? (1 if Interested)						-0.179***
	-0.322**	-0.448***	-0.449***	-0.127**	-0.178***	
	(0.143)	(0.136)	(0.136)	(0.057)	(0.054)	(0.054)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)						-0.172***
	-0.463***	-0.428***	-0.431***	-0.183***	-0.170***	
	(0.165)	(0.158)	(0.157)	(0.065)	(0.063)	(0.062)
Constant	0.476	0.447	0.447			
	(0.297)	(0.297)	(0.294)			
Observations	573	618	618	573	618	618

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 15. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Overall, how satisfied are you with your life at home these days? (1 if Satisfied)

VARIABLES	(1) OLS	(2) OLS	(3) OLS
Number of solar street lights per household	0.084		
	(0.078)		
Solar street lights installed in the neighborhood (1 if Yes)		-0.005	
		(0.040)	
Drinking water improvements in process of installation (1 if Yes)			-0.016
			(0.039)
Age - 26-35 (vs. 18-25)	0.017	0.030	0.030
	(0.051)	(0.048)	(0.048)
Age - 36-45 (vs. 18-25)	0.093	0.098	0.099
	(0.078)	(0.075)	(0.075)
Age - 46-55 (vs. 18-25)	-0.045	-0.029	-0.028
	(0.111)	(0.107)	(0.107)
Age - 56-65 (vs. 18-25)	0.098	0.110	0.108
	(0.175)	(0.166)	(0.167)
Age - 66-75 (vs. 18-25)	-0.258**	-0.273**	-0.266**
	(0.106)	(0.106)	(0.106)
Male (vs. Female)	-0.274***	-0.286***	-0.287***
	(0.069)	(0.064)	(0.064)
Married (vs. Single)	-0.130**	-0.099*	-0.100*
	(0.059)	(0.058)	(0.058)
Number of children living with you	0.033**	0.028**	0.028**
	(0.014)	(0.014)	(0.014)
Years of education	-0.002	-0.001	-0.001
	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	-0.047	-0.023	-0.024
	(0.110)	(0.110)	(0.110)
Profession - Government employee (vs. Jobless)	0.027	0.049	0.049
	(0.063)	(0.061)	(0.061)
Profession - Agriculture (vs. Jobless)	-0.097	-0.093	-0.094
	(0.074)	(0.073)	(0.073)
Profession - Self-employed (vs. Jobless)	-0.118*	-0.107*	-0.107*
	(0.065)	(0.062)	(0.062)
Profession - Housewife (vs. Jobless)	-0.036	-0.025	-0.022
	(0.080)	(0.077)	(0.078)
Profession - Student (vs. Jobless)	0.064	0.076	0.077
	(0.076)	(0.071)	(0.071)
Own a vehicle (vs. Do not own)	0.114	0.096	0.097
	(0.070)	(0.066)	(0.066)
Own a home (vs. Do not own)	0.113**	0.161***	0.162***
	(0.055)	(0.052)	(0.051)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.182***	0.188***	0.188***
	(0.052)	(0.049)	(0.049)
How interested would you say you are in politics? (1 if Interested)	0.104**	0.098**	0.098**
	(0.046)	(0.043)	(0.043)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.087	-0.094*	-0.094*
	(0.054)	(0.053)	(0.053)
Constant	0.541***	0.524***	0.532***
	(0.099)	(0.099)	(0.098)

Observations	572	617	617
R-squared	0.228	0.258	0.258

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 16. Estimated Probit coefficients and Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Overall, how satisfied are you with your life at home these days? (1 if Satisfied)

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Marginal Effects	(5) Marginal Effects	(6) Marginal Effects
Number of solar street lights per household	0.302			0.117		
	(0.269)			(0.104)		
Solar street lights installed in the neighborhood (1 if Yes)		0.019			0.007	
		(0.123)			(0.048)	
Drinking water improvements in process of installation (1 if Yes)			-0.022			-0.008
			(0.120)			(0.047)
Age - 26-35 (vs. 18-25)	0.053	0.091	0.092	0.020	0.035	0.036
	(0.160)	(0.155)	(0.155)	(0.061)	(0.060)	(0.060)
Age - 36-45 (vs. 18-25)	0.292	0.306	0.312	0.115	0.121	0.123
	(0.229)	(0.225)	(0.225)	(0.090)	(0.089)	(0.089)
Age - 46-55 (vs. 18-25)	-0.146	-0.113	-0.105	-0.054	-0.043	-0.040
	(0.347)	(0.345)	(0.345)	(0.127)	(0.129)	(0.129)
Age - 56-65 (vs. 18-25)	0.398	0.432	0.434	0.157	0.171	0.172
	(0.700)	(0.687)	(0.690)	(0.277)	(0.270)	(0.271)
Male (vs. Female)	-0.806***	-0.864***	-0.865***	-0.312***	-0.338***	-0.339***
	(0.207)	(0.201)	(0.201)	(0.080)	(0.079)	(0.079)
Married (vs. Single)	-0.445**	-0.356*	-0.358*	-0.172**	-0.139*	-0.140*
	(0.195)	(0.194)	(0.194)	(0.076)	(0.076)	(0.076)
Number of children living with you	0.107**	0.096**	0.096**	0.042**	0.038**	0.038**
	(0.045)	(0.044)	(0.044)	(0.017)	(0.017)	(0.017)
Years of education	-0.005	-0.004	-0.004	-0.002	-0.002	-0.002
	(0.013)	(0.012)	(0.012)	(0.005)	(0.005)	(0.005)
Profession - Private employee (vs. Jobless)	-0.156	-0.075	-0.075	-0.060	-0.029	-0.029
	(0.339)	(0.336)	(0.337)	(0.129)	(0.131)	(0.131)
Profession - Government employee (vs. Jobless)	0.081	0.155	0.156	0.032	0.062	0.062
	(0.193)	(0.188)	(0.188)	(0.076)	(0.075)	(0.075)
Profession - Agriculture (vs. Jobless)	-0.319	-0.306	-0.314	-0.120	-0.116	-0.118
	(0.238)	(0.239)	(0.239)	(0.087)	(0.088)	(0.087)
Profession - Self-employed (vs. Jobless)	-0.362*	-0.329	-0.329	-0.135*	-0.124*	-0.124*
	(0.209)	(0.201)	(0.201)	(0.076)	(0.074)	(0.074)
Profession - Housewife (vs. Jobless)	-0.097	-0.071	-0.060	-0.038	-0.028	-0.023
	(0.247)	(0.245)	(0.246)	(0.096)	(0.096)	(0.096)
Profession - Student (vs. Jobless)	0.177	0.228	0.232	0.070	0.091	0.092
	(0.220)	(0.212)	(0.212)	(0.087)	(0.084)	(0.084)
Own a vehicle (vs. Do not own)	0.345*	0.289	0.293	0.134*	0.113	0.115
	(0.204)	(0.199)	(0.200)	(0.079)	(0.078)	(0.078)
Own a home (vs. Do not own)	0.308*	0.464***	0.466***	0.119*	0.182***	0.183***
	(0.162)	(0.154)	(0.154)	(0.063)	(0.060)	(0.060)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.547***	0.574***	0.572***	0.212***	0.225***	0.224***
	(0.150)	(0.144)	(0.144)	(0.058)	(0.057)	(0.057)
How interested would you say you are in politics? (1 if Interested)	0.308**	0.296**	0.295**	0.119**	0.116**	0.116**
	(0.138)	(0.134)	(0.133)	(0.053)	(0.052)	(0.052)

How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	-0.264*	-0.283*	-0.288*	-0.102*	-0.111*	-0.113*
	(0.160)	(0.160)	(0.158)	(0.062)	(0.062)	(0.062)
Constant	0.154	0.092	0.118			
	(0.297)	(0.304)	(0.301)			
Observations	571	616	616	571	616	616

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 17. Estimated OLS coefficients for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Overall, how satisfied are you with the community in which you live these days? (1 if Satisfied)

VARIABLES	(1) OLS	(2) OLS	(3) OLS
Number of solar street lights per household	-0.047		
	(0.064)		
Solar street lights installed in the neighborhood (1 if Yes)		-0.126***	
		(0.040)	
Drinking water improvements in process of installation (1 if Yes)			-0.108***
			(0.038)
Age - 26-35 (vs. 18-25)	-0.003	0.020	0.018
	(0.048)	(0.046)	(0.047)
Age - 36-45 (vs. 18-25)	0.004	0.080	0.075
	(0.069)	(0.068)	(0.068)
Age - 46-55 (vs. 18-25)	0.053	0.088	0.071
	(0.102)	(0.098)	(0.098)
Age - 56-65 (vs. 18-25)	0.264	0.271	0.247
	(0.214)	(0.216)	(0.212)
Age - 66-75 (vs. 18-25)	-0.220**	-0.154	-0.166
	(0.102)	(0.102)	(0.102)
Male (vs. Female)	0.001	-0.025	-0.023
	(0.060)	(0.056)	(0.056)
Married (vs. Single)	-0.084	-0.109*	-0.106*
	(0.061)	(0.060)	(0.059)
Number of children living with you	0.006	0.005	0.005
	(0.013)	(0.013)	(0.013)
Years of education	0.009**	0.009**	0.009**
	(0.004)	(0.004)	(0.004)
Profession - Private employee (vs. Jobless)	-0.038	-0.053	-0.070
	(0.095)	(0.090)	(0.092)
Profession - Government employee (vs. Jobless)	0.045	0.040	0.034
	(0.058)	(0.056)	(0.056)
Profession - Agriculture (vs. Jobless)	-0.043	-0.057	-0.053
	(0.074)	(0.074)	(0.074)
Profession - Self-employed (vs. Jobless)	0.100	0.058	0.058
	(0.069)	(0.065)	(0.065)
Profession - Housewife (vs. Jobless)	0.030	0.060	0.058
	(0.073)	(0.071)	(0.071)
Profession - Student (vs. Jobless)	-0.033	0.009	0.004
	(0.073)	(0.069)	(0.069)
Own a vehicle (vs. Do not own)	-0.012	-0.010	-0.008
	(0.067)	(0.062)	(0.062)
Own a home (vs. Do not own)	0.069	0.102*	0.100*
	(0.057)	(0.053)	(0.053)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.292***	0.282***	0.282***
	(0.056)	(0.052)	(0.053)
How interested would you say you are in politics? (1 if Interested)	0.179***	0.170***	0.172***
	(0.049)	(0.046)	(0.046)
How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	0.059	0.032	0.042
	(0.048)	(0.047)	(0.047)
Constant	0.137	0.260***	0.240**

	(0.095)	(0.096)	(0.094)
Observations	572	617	617
R-squared	0.284	0.305	0.303

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Table 18. Estimated Probit coefficients and Marginal effects for Solar Street lights and Drinking water improvements intervention.

Dependent variable: Overall, how satisfied are you with the community in which you live these days? (1 if Satisfied)

VARIABLES	(1) Probit	(2) Probit	(3) Probit	(4) Marginal Effects	(5) Marginal Effects	(6) Marginal Effects
Number of solar street lights per household	-0.133			-0.051		
	(0.241)			(0.093)		
Solar street lights installed in the neighborhood (1 if Yes)		-0.422***			-0.166***	
		(0.132)			(0.052)	
Drinking water improvements in process of installation (1 if Yes)			-0.374***			-0.147***
			(0.126)			(0.050)
Age - 26-35 (vs. 18-25)	-0.012	0.067	0.059	-0.004	0.026	0.023
	(0.163)	(0.160)	(0.160)	(0.063)	(0.062)	(0.062)
Age - 36-45 (vs. 18-25)	0.010	0.261	0.247	0.004	0.103	0.097
	(0.227)	(0.223)	(0.222)	(0.087)	(0.088)	(0.088)
Age - 46-55 (vs. 18-25)	0.179	0.318	0.272	0.070	0.125	0.107
	(0.328)	(0.325)	(0.323)	(0.129)	(0.129)	(0.128)
Age - 56-65 (vs. 18-25)	0.795	0.834	0.773	0.307	0.320	0.298
	(0.734)	(0.748)	(0.750)	(0.257)	(0.256)	(0.263)
Male (vs. Female)	0.013	-0.068	-0.066	0.005	-0.027	-0.026
	(0.214)	(0.203)	(0.203)	(0.083)	(0.080)	(0.080)
Married (vs. Single)	-0.257	-0.341*	-0.328*	-0.099	-0.134*	-0.129*
	(0.200)	(0.198)	(0.197)	(0.077)	(0.078)	(0.077)
Number of children living with you	0.017	0.014	0.014	0.007	0.005	0.005
	(0.044)	(0.043)	(0.043)	(0.017)	(0.017)	(0.017)
Years of education	0.029**	0.028**	0.028**	0.011**	0.011**	0.011**
	(0.013)	(0.012)	(0.012)	(0.005)	(0.005)	(0.005)
Profession - Private employee (vs. Jobless)	-0.126	-0.173	-0.242	-0.047	-0.065	-0.090
	(0.338)	(0.324)	(0.334)	(0.124)	(0.120)	(0.121)
Profession - Government employee (vs. Jobless)	0.142	0.137	0.121	0.055	0.054	0.048
	(0.200)	(0.197)	(0.197)	(0.077)	(0.077)	(0.077)
Profession - Agriculture (vs. Jobless)	-0.143	-0.200	-0.185	-0.053	-0.075	-0.070
	(0.237)	(0.242)	(0.240)	(0.087)	(0.089)	(0.089)
Profession - Self-employed (vs. Jobless)	0.319	0.196	0.194	0.125	0.077	0.077
	(0.210)	(0.201)	(0.201)	(0.083)	(0.079)	(0.079)
Profession - Housewife (vs. Jobless)	0.103	0.203	0.198	0.040	0.080	0.078
	(0.258)	(0.256)	(0.255)	(0.100)	(0.101)	(0.101)
Profession - Student (vs. Jobless)	-0.106	0.038	0.023	-0.040	0.015	0.009
	(0.234)	(0.227)	(0.226)	(0.087)	(0.088)	(0.088)
Own a vehicle (vs. Do not own)	-0.012	0.001	0.005	-0.004	0.000	0.002
	(0.217)	(0.211)	(0.212)	(0.084)	(0.083)	(0.083)
Own a home (vs. Do not own)	0.213	0.333**	0.328**	0.082	0.131**	0.129**
	(0.165)	(0.157)	(0.157)	(0.064)	(0.062)	(0.062)
How satisfied are you with the financial situation of your household? (1 if Satisfied)	0.796***	0.770***	0.766***	0.307***	0.303***	0.301***
	(0.150)	(0.143)	(0.143)	(0.058)	(0.056)	(0.057)
How interested would you say you are in politics? (1 if Interested)	0.534***	0.515***	0.519***	0.206***	0.203***	0.204***
	(0.138)	(0.132)	(0.132)	(0.053)	(0.052)	(0.052)

How much violence have you or a member of your family witnessed over the past year? (1 if Not much)	0.180	0.086	0.117	0.069	0.034	0.046
	(0.164)	(0.160)	(0.160)	(0.063)	(0.063)	(0.063)
Constant	-1.070***	-0.673**	-0.733**			
	(0.325)	(0.324)	(0.321)			
Observations	571	616	616	571	616	616

Robust standard errors are in parentheses. *indicates significance at the 10 percent level; ** at the 5 percent significance level; and *** at the 1 percent significance level.

Annex.IV Survey Questionnaire

Disclaimer

This questionnaire is a part of a Survey that the Government has sponsored. The purpose of this survey is to find the trust level that people have on the Government. The questionnaire includes few questions mainly focusing on the Political Issues of FATA, trust level that people have on different Government Institutions and the different ways these institutions offer services to the populace. All the questions asked and data collected respectively is purely used for the research and academic purposes. Your responses and participation will be limited only to statistics for the research and will not identify you as an individual in any part of the study. Your participation to fill this questionnaire though remains completely voluntary and consequently, your responses and answers will form an important part of statistical study in a phase of the research study.

Thank you for your cooperation.

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1	Age	18-25(235)	26-35(237)	36-45(100)	46-55(43)	56-65(5)	65-75(1)	Over 75(0)	
2	Gender	Male(453)			Female(168)				
3	Marital status	Single/ Unmarried (go to question 5)(151)			Married(465)		Widowed(5)		
4	Number of children living with you	0(78)	1(42)	2(101)	3(84)	4(79)	5(39)	6(7)	Any other(41)
5	Education	None(286)	Primary(86)	Middle(32)	SSC(34)	FA/FSc(57)	BA/ BSc(81)	MA or Higher(37)	Professional degree (MBBS etc.)(2)	Darse Nizami(5)
6	Profession	Private employee(22)	Gov't Employee(98)	Agriculture(59)	Self Employed(81)	Housewife(138)	Jobless(131)	Student(91)	
7	With which ethnic group you identify yourself?	Pashtun(617)	Hindko Speaking1	Chitrali(1)	Gujjar(2)	Hazara(0)	Punjabi(0)	Other(0)	
8	What type of vehicle do you own?	Car(30)	Motorcycle (8)	Bicycle(15)	Another Motorized vehicle(5)	Do not own a vehicle(563)			
9	Do you know your home?	Yes(171)			No(450)				
10	How much land do you own?	In Acres/ Marlas/ Jareebs							
11a	What is your primary source of drinking water? (circle the one that best applies)	Municipal piped water(43)	Municipal water tank(171)	Private well(219)	Private motor(115)	Hand pump(69)	Harvest rain water(4)		
11b	Which if any of the following water purification methods do you use? (circle all that apply)	Boiling(89)	Chlorine Tablets(136)	Filter(59)	Other (indicate alternative method)(13)	None(324)			
11c	How many children under 5 live in the household	0(88)	1(152)	2(181)	3(110)	4 or above(90)			
11d	Which of the following health conditions have a member of your household suffered from over the last 4 weeks? (circle all that apply)	Diarrhea (54)	Stomach ache (145)	Vomiting 107)	Fever (209)	None of them (106)			
11e	Which of the following health conditions have a member of your household suffered from over the last 6 months? (circle all that apply)	Diarrhea (49)	Stomach ache	Vomiting (141)	Fever (219)	None of them (98)			
11f	Which of the following health conditions has a child under age 5 of your household suffered from over the last 4 weeks? (circle all that apply)	Diarrhea (81)	Stomach ache	Vomiting (171)	Fever 172)	None of them (31)			

11g	Which of the following health conditions have a child under age 5 of your household suffered from over the last 6 months? (circle all that apply)	Diarrhea (73)	Stomach ache	Vomiting (199)	Fever (182)	None of them (48)
11h	Which of the following health conditions have a child under age 5 of your household suffered from over the last 1 year? (circle all that apply)	Diarrhea (150)	Stomach ache	Vomiting (160)	Fever (144)	None of them (65)

11i	How many episodes of diarrhea if any a child under age 5 in your household has suffered in the last 6 months? (circle all that apply)	1(143)	2-5(194)	5-10(124)	10 or above(17)	None of them(93)
11j	How many episodes of diarrhea if any a child under age 5 in your household has suffered in the last 1 year? (circle all that apply)	1(95)	2-5(246)	5-10(139)	10 or above(11)	None of them(118)

11k	Child diarrhea should be treated by only giving salts dissolved in water	Yes(541)	No(79)
11l	Child diarrhea should be treated by antibiotics	Yes(484)	No(137)
11m	Child diarrhea should be treated by giving easily digestible foods	Yes(255)	No(366)
11n	Child diarrhea should be treated by stopping food	Yes(226)	No(395)
110	Child diarrhea should be treated by domestic tips	Yes(344)	No(277)

11p. Do you have any information regarding TB Disease? Yes____(166) No____(454)

11q. which of the following symptoms, if any, relate to TB:

a. A bad cough that lasts 3 weeks or longer(74)

b. Pain in the chest(28)

c. Coughing up blood or sputum (phlegm from deep inside the lungs)(87)

d. Weakness or fatigue (10)

e. Weight loss(22)

f. No appetite(7)

g. Chills(9)

h. Fever(9)

i. Sweating at night(1)

11r. Do you have any TB patient in your family or locality: Yes (146) No (471)

11s. A TB patient can fully recover if given appropriate and complete medication: Yes(466) No(151)

11t. how does a person contract TB infection (which of the following is true):

i. By touching a TB patient (17)

ii. By sharing the room(53)

iii. By inhaling the air which had TB germs (49)

iv. Shaking someone's hand(6)

v. Sharing food or drink(119)

vi. Touching bed linens (248)

vii. Sharing toothbrushes(45)

12. Many people claim that FATA has a special status due to its tribal traditions; therefore, it should have a special administrative arrangement. In your opinion, which of the following administrative structures should FATA have? (circle the one that best applies).

1. A political agent appointed by the government to maintain law and order and manage development in the area (92)
2. An elected local government to management agency, town and village level development. (96)
3. A combination of a political agent and an elected local government. (62)
4. Don't know(197)
5. Does not apply to me(140)
6. Don't Care(34)

13. In your opinion, which of the following administrative structures should FATA have? (circle the one that best applies)

1. A separate province with all the provincial political and administrative structure. (104)
2. Merged into KPK. (137)
3. Remain a federally administered special entity.(40)
4. Don't know(151)
5. Does not apply to me (154)
6. Do not care (35)

14. In your opinion, which of the following entities would best improve service delivery in your district or agency?

1. The Government in Islamabad (34)
2. Provincial government officials (65)
3. District or Agency Civil servants (54)
4. Community based organizations (47)
5. Tribal councils (248)
6. Don't know (138)
7. Does not apply to me (19)
8. Do not Care (15)

15.	I am satisfied with the quality of the services provided by the political administration.	Strongly Disagree –(82)	157	59	92	122	72	13	6	8	Strongly Agree –(10)
16.	The government is responsible for creating employment opportunities.	52	88	59	57	78	72	67	36	45	66
17.	The government does a good job of providing employment opportunities for the people in your village.	101	125	86	127	90	38	26	15	6	6
18.	The Office of the Political Agent is essential for development in FATA	95	92	95	105	88	69	22	21	19	15
19.	The Office of the Political Agent is essential for maintaining peace and security.	85	123	110	104	89	35	269	16	12	21
20.	The Office of the Political Agent is essential for ensuring that there is a fair and transparent system of justice.	92	110	107	109	75	36	21	17	18	34
21.	Over the past year, the FATA Administration has made investments that have improved the schools in your agency.	101	96	88	85	92	63	39	29	14	12
22.	Over the past year, the FATA Administration has made investments that have improved healthcare in your agency.	100	110	76	87	90	71	36	22	16	13

23.	Over the past year, the FATA Administration has taken efforts that have improved the system of justice in your agency	85	116	106	116	70	48	35	22	11	10
24.	Over the past year, government actions s have improved the governance systems (like the right to information) in your region	107	111	117	110	73	37	18	19	17	11
25.	Over the past year, federal government investments have improved large scale infrastructure – we should give examples here - in your region	92	102	117	70	81	68	24	29	27	9

26a	Over the past year, FATA Administration investments have improved the local infrastructure in your region.	79	121	93	101	95	69	23	22	13	5	
26b	How would you rate the quality of your drinking water?	58	70	79	102	85	114	49	25	20	18	
26c	Over the past year, the FATA administration's investments have improved the quality of my household's drinking water supply.	54	75	84	153	118	54	34	24	19	4	
26d	Over the past year, the FATA administration's investments in street lights have improved the visibility at night in my neighborhood.	75	58	42	55	58	70	100	52	36	78	
26e	Over the past year, the FATA administration's investments in street lights have improved the security in my neighborhood.	78	45	37	76	115	92	59	30	17	71	
27.	Over the past year, the Federal government has taken actions that have aided the rehabilitation of IDPs in your region.											
28.	Over the past year, the FATA Administration has taken actions that have aided the rehabilitation of IDPs in your region.											
29.	Over the past year, the Federal Government has taken efforts that have helped to control militancy in your region.	18	86	50	120	147	74	57	41	25	3	
30	Over the past year, the FATA Administration has taken actions that have aided the rehabilitation of IDPs in your region.											
30a	Over the past year, the Local Government has taken actions that have aided the rehabilitation of IDPs in your region.											
Now I'm going to name a number of organizations. For each one, please tell me how much confidence you in have in them.												
31.	Mosque (Any Religious Institution You belong Too)	No Confidence-	58	42	55	58	70	100	53	36	Very High Confidence – (78)	
31a	Jirga	57	25	29	64	57	109	99	72	70	38	
32.	The Municipality	85	57	115	176	10	32	30	10	5	6	
33.	The Police Department	87	76	80	91	70	84	41	33	47	10	
34.	The District Court or the PA Court	89	96	113	113	77	44	25	32	17	13	
35.	WAPDA	132	78	106	81	49	72	42	31	21	5	

36	The State Media	108	86	112	114	63	37	29	26	38	6
37	The Private Media	101	73	107	114	62	45	37	44	32	6
38	The Government in Islamabad	110	74	94	108	71	61	49	26	19	6
39	The Civil Services	104	65	91	98	94	82	41	29	11	5

I am now going to ask you a series of questions about yourself and your family.											
40	How satisfied are you with the financial	Dissatisfied(6)	73	5	119	10	77	44	33	20	Satisfied (91)
41	All things considered, how satisfied are you with your life as a whole these days?	7	9	19	40	74	103	115	116	52	86
42	How interested would you say you are in politics?	Not Interested	31	39	125	109	50	39	30	35	Very Interested-(114)
43	How proud are you to be a Pakistani?	Not at all (8)	23	32	30	60	97	105	64	62	Very Proud (138)
44	How much violence have you or a member of your family witnessed over the past year?	Haven't witnessed any violence – ~~(256)~~	30	61	104	57	40	27	22	19	Witnessed extreme amount of violence – ~~(5)~~
45	How often have you or members of your family heard artillery shells, drone strikes, or other violent explosions over the past	Heard them often (212)	22	35	56	71	111	60	31	15	Never Heard them (8)
We are now going to ask you some questions about your attitudes towards others.											
46	Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?	a) Most people can be trusted.(322)									b) Can't be too careful.(299)
47	Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?	a) Would take advantage of you.(376)									b) Would try to be fair.(245)
48	Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?	a) Try to be helpful.(368)									b) Looking out for themselves.(253)
We are now going to read you a series of statements. We would like to know to what extent do you agree with each of the following statements?											
49	I like to help others	Strongly Agree (115)	Agree (148)	Undecided (77)	Disagree (147)	Strongly Disagree(134)					
50	I trust others	25	53	279	140	124					

51	When dealing with strangers, one is better off using caution before trusting them	27	204	99	126	165

We are now going to read a series of statements about actions that you may or may not engage in. We would like to know the frequency with which you do each.

52	How often have you benefited from the generosity of a person you did not know?	Never(431)	Rarely(134)	Sometimes(42)	Often(7)	V. Often(7)
53	How often do you leave your house or car door unlocked?	133	191	247	40	10

54.	How often do you lend personal possessions other than money to others?	133	269	146	60	13

55	Taking all things together, how satisfied are you with your life as a whole these days?	Highly Unsatisfied (21)	232	181	91	Highly Satisfied(96)
56	Overall, how satisfied are you with your life at home these days?	13	84	257	170	95
57	Overall, how satisfied are you with your present job these days?	26	157	78	84	55
58	Overall, how satisfied are you with your present health?	26	59	175	202	155
59	Overall, how satisfied are you with the community in which you live these days?	55	103	188	143	130

60. Have you ever used Internet or Mobile to access any service offered by government? Yes (214) (If yes, go to question 62)

No (394) (If no, go to question 61)

61. Why you have not used these Internet or Mobile Services?

i. I'm illiterate (36)
ii. I'm shy/afraid to use these services(8)
iii. I don't know about these services (64)
iv. I don't have Internet or Mobile to use these services(108)
v. I don't know how to use these services online or on mobile(33)
vi. These services are too complicated (25)
vii. There services are in English which is difficult(23)
viii. I tried but the mobile services/ website had too many problems (10)
ix. These services are a Ridicules (2)

62. Where did you get to know about the above services (Tick the One that applies):

i. Radio (52)
ii. Television (62) iii. Newspaper (33)
iv. Government Official(4) v. NGOs (12)
vi. Hujra (7)
vii. Friend or Family(46)
viii. Any other (Please Specify)(0)