

Researching livelihoods and
services affected by conflict



Surveying livelihoods, service delivery and governance: baseline evidence from Pakistan

Working Paper 14

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About us

Secure Livelihoods Research Consortium (SLRC) aims to generate a stronger evidence base on how people in conflict-affected situations (CAS) make a living, access basic services like health care, education and water, and perceive and engage with governance at local and national levels. Providing better access to basic services, social protection and support to livelihoods matters for the human welfare of people affected by conflict, the achievement of development targets such as the Millennium Development Goals (MDGs) and international efforts at peace- and state-building.

At the centre of SLRC's research are three core themes, developed over the course of an intensive one-year inception phase:

- State legitimacy: experiences, perceptions and expectations of the state and local governance in conflict-affected situations
- State capacity: building effective states that deliver services and social protection in conflict-affected situations
- Livelihood trajectories and economic activity in conflict-affected situations

The Overseas Development Institute (ODI) is the lead organisation. SLRC partners include the Afghanistan Research and Evaluation Unit (AREU), the Centre for Poverty Analysis (CEPA) in Sri Lanka, Feinstein International Center (FIC, Tufts University), Focus1000 in Sierra Leone, Food and Agriculture Organization (FAO), Humanitarian Aid and Reconstruction of Wageningen University (WUR) in the Netherlands, the Nepal Centre for Contemporary Research (NCCR), and the Sustainable Development Policy Institute (SDPI) in Pakistan.

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Preface

As a multi-year, cross-country research programme, one of the overarching aims of the Secure Livelihoods Research Consortium (SLRC) is to contribute towards a better understanding of what processes of livelihood recovery and state building look like following periods of conflict and how positive outcomes are achieved. Understanding socioeconomic change of this nature is possible only when appropriate evidence exists. This, in turn, requires the availability of reliable longitudinal data that are able to measure shifts, fluctuations and consistencies in the performance of a given unit of analysis (e.g., an individual, a household, an economy) against a set of outcome indicators between at least two points in time.

In order to directly address this need for appropriate evidence – evidence that tells us something about processes playing out over time and in more than a single context – SLRC is carrying out original panel surveys in five countries: the Democratic Republic of Congo (DRC), Nepal, Pakistan, Sri Lanka and Uganda. In two other countries, Afghanistan and South Sudan, we are following a slightly different process by tagging on to existing panel surveys. Designed to produce information on people's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context), their access to basic services (education, health, water), social protection and livelihood services and their relationships with governance processes and practices (participation in public meetings, experience with grievance mechanisms, perceptions of major political actors), the surveys are being implemented twice in each country. The first round took place in late 2012 to early 2013, and the second round – where we will attempt to re-interview the same households – will take place in late 2015 to early 2016.

Undertaking a cross-country, comparative panel survey in difficult environments is far from a straightforward exercise. For purposes of transparency and clarity, we highlight the two major limitations of our baseline analyses and reports below.

The first limitation concerns the methods of statistical analysis used. In order to identify factors that appear to (partially) determine outcomes of various kinds – for example, food security or perceptions of state actors – and compare them across countries, it was necessary for SLRC researchers to carry out standardised regression analyses of the survey data. If the analysis were being carried out solely at the country level, what would ordinarily happen is that each country team would make their own decisions – based on theory, existing knowledge and context – about which dependent and independent variables to include in each of their regressions and which specific regression methods to use. In an attempt to generate findings that would usefully tell us something about patterns or discrepancies across countries, it was originally decided that each country team would include a standardised list of independent variables in each of their regressions and use the same regression techniques; this would then enable the global survey team to produce a synthesis based on similar-looking analyses at the country level. Following such an approach, however, creates a trade-off. For instance, including a long list of comparable independent variables means including certain variables that for some countries may be less relevant or even co-linear (an undesirable statistical situation that arises when two independent or explanatory variables share a strong linear relationship). As such, we have tested for multi-co-linearity in all regressions and have re-specified those that were affected by this problem – at the expense of some cross-country comparability. Other reasons the results are not completely comparable across countries include low numbers of responses for some questions/variables; and low levels of variation between responses for some questions/variables (when either situation arose, such variables were not included in the regression analysis).

The second limitation of the baseline reports is their absence of theory and contextualisation. Indeed, the reports focus primarily on empirical information generated through the surveys, rather than on a thorough theoretical or grounded explanation of findings. As such, direct attempts have not been made to reference the findings in relation to other relevant pieces of research or to provide theoretical explanations of relationships and patterns. This is the result of a choice actively made by SLRC researchers at the outset of the survey process. Rather than allocate additional resources to producing country reports that offer comprehensive explanations of findings, it was decided that the outputs emerging from the first survey round would constitute basic, relatively unembellished baseline reports. While still presenting information of interest, one of the primary purposes of the baseline reports is to provide a clear and solid basis against which the second-round survey data can be compared and interpreted. It is in those second-round reports that far greater attention will be paid to embedding the SLRC survey findings – findings that will be of greater value given their longitudinal and panel nature – in the appropriate theoretical and contextual foundations.

Abbreviations and acronyms

BISP	Benazir Income Support Programme
DFID	Department for International Development
KP	Khyber Pakhtunkhwa
NGO	Non-governmental Organisation
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PCNA	Post Crisis Needs Assessment
SDC	Swiss Agency for Development and Cooperation
SDPI	Sustainable Development Policy Institute
SLRC	Secure Livelihoods Research Consortium
UN	United Nations
UNDP	UN Development Programme
US	United States
USAID	US Agency for International Development
WFP	World Food Programme

Executive summary

In 2012/13, the Sustainable Livelihoods Research Consortium (SLRC) implemented the first round of an original cross-country panel survey in Pakistan – a survey designed to produce information on:

- People's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context);
- Their access to basic services (education, health, water), social protection and livelihood assistance; and
- Their relationships with governance processes and practices (participation in public meetings, experience with grievance mechanisms, perceptions of major political actors).

This paper reports on the baseline findings emerging from statistical analysis of the Pakistan first-round data.

The survey sample

The survey was conducted in Swat and Lower Dir districts of Khyber Pakhtunkhwa (KP) between September and October 2012. Both of these districts were severely affected by violent conflicts between the Pakistani armed forces and the Taliban during 2008/09, as well by floods in 2010, which together saw large-scale displacement of the population. After the conflict and floods, there was a massive inflow of aid geared towards the restoration of basic services and livelihoods.

A total of 2,114 households were surveyed (1,270 from Swat and 844 from Lower Dir), with 34% of respondents being female. Our data are not representative at the district level, but are representative at the village level. Our data are also statistically significant at both union council and village levels.

In the study areas, an overwhelming majority (about 99%) of respondents from the sampled households in both districts reported that they had experienced fighting in the previous three years; around 90% of households in Swat and even more in Lower Dir had been displaced during conflicts between the Taliban and the Pakistani Army. More than one-third of households had at least one member of the family who had migrated outside the country for employment. More than half of respondents were illiterate (no education) and very few respondents had more than intermediate (12 years of schooling) education.

Livelihood status

Our survey generated data on livelihood activities (including how these changed during and after conflict), levels of wealth (proxied by asset ownership) and food insecurity (estimated using the Coping Strategies Index) among our sample population. Five key findings emerge from interpretation of descriptive statistics and regression analyses.

First, **farming is the most prevalent livelihood activity** for individuals in our sample, followed by overseas labour and non-agriculture-based labour. However, **overseas labour (remittances) is the primary income source for the majority** of households. Incidence of not having paid employment is strikingly high in the study area. Very few people have their own business, do government or private sector jobs or work as skilled labourers. There was a drastic reduction in most livelihood activities during the conflict period. For instance, before the conflict, 800 and 700 persons pursued farming and daily wage labour, respectively; during the conflict, fewer than 100 persons worked in each activity. However, an increase in overseas migration and farming after the conflict was reported.

Second, the results also show that **about 50% of households depend on a single source of livelihood**, in spite of the fact that average household size is quite large (about nine members per household). The data also indicate a positive correlation between the number of income sources per household and

food security. This implies that donor interventions and public policy should facilitate diversification beyond agriculture, while at the same time keeping an emphasis on supporting agricultural activities, because farming still remains the major livelihood activity in the post-conflict areas under study.

Third, as is to be expected, **households with higher average education tend both to be less food insecure and to own more assets**. There is a significant negative correlation between food insecurity and assets, but this is not consistent across districts: while food insecurity is more prevalent among sampled households in Swat district, asset ownership is also higher for these households.

Fourth, **having experienced a crime has a positive and significant relationship with asset ownership and a negative and significant relationship with food insecurity**. While we cannot be sure of causality, this suggests households that are more food secure and have more assets experience more crimes. Experience of shocks is positively correlated with asset ownership, but **the number of shocks experienced by a household is significantly and positively associated with food insecurity** – that is, the more shocks a household experiences, the more food insecure it is likely to be.

Fifth, in terms of access to services and livelihoods, we found a **positive correlation between access to livelihood assistance and both asset ownership and greater food security**. There is also a significant and positive association between improvements in farming (owing to the receipt of seeds and tools) and both asset ownership and greater food security. Though we cannot draw conclusions on causality, it may be the case that livelihood support has helped increase household assets and food security. This suggests livelihood assistance is well targeted. There is a **positive correlation between receipt of the social protection transfer (Benazir Income Support Programme, or BISP) and food insecurity**. It is unlikely that receipt of BISP is making households more food insecure; rather, this suggests BISP is well targeted towards the poor.

Basic services, social protection and livelihood assistance

Our survey asked respondents about access to a range of services and support – including health, education, water, social protection and livelihood assistance – as well as their experiences of using them. Again, five key findings emerge.

First, in general, there are **relatively high levels of access to and satisfaction with some basic services** within our sample population, particularly for health and education. Average travel time is 34 minutes to health centres and about 10 minutes to primary schools. Health and education services seem to be in good shape after the conflict, possibly because of high government, non-governmental organisation (NGO) and international agency investments in these areas. But **access to piped and safe drinking water is much lower compared with pre-conflict and pre-floods levels**. Just over 10% of households have piped water, and 20% never or rarely have drinking water available. The overwhelming majority of households maintain drinking water themselves.

Second, there seems to be a **link between journey times to the health centre or school (for boys and girls) and greater satisfaction with the service** and between greater assets and greater satisfaction with the service. For example, the data suggest households with a higher Morris Score Index value send their male children to more distant schools. Respondents from wealthier households are also more likely to report being satisfied with the service. This suggests **wealthier households tend to use more distant but better-quality services**.

Third, a total of **25% of households receive a social protection transfer** (of which 80% receive the BISP cash transfer); **24% receive some form of livelihood assistance** (the majority of these receive seeds and tools).

Fourth, **there is fairly high satisfaction with the usefulness and timeliness of livelihood assistance**. It is important to note, however, that respondents from households receiving such support from the government are likely to be less satisfied. Satisfaction with the **BISP social protection transfer is**

moderate – 60% of respondents said it helped them a bit in buying extra food, but this is arguably to be expected, given the low transfer level. Around 34% of households thought the transfer was too small to make any difference.

Finally, although there is no consistent set of variables explaining why some respondents are more satisfied with services than others, there is some indication that **people's specific personal experiences with the service heavily influences their overall level of satisfaction**. Regression analysis of respondents' experience with both education and health suggests factors such as 'satisfaction with the availability of medicine', 'satisfaction with the waiting time in the clinic', 'satisfaction with the number of teachers' and 'satisfaction with the quality of the teaching staff' are strongly and positively associated with higher levels of overall satisfaction with those services. We also observe this for social protection: descriptive statistics show the majority of respondents from households (80%) that have never received the BISP transfer on time and/or in the right amount said the transfer was too small to make any difference in their lives.

Governance

In order to examine people's relationships with governance actors, our survey generated information on respondents' interactions with and perceptions of local and central government.

Data show **the vast majority of respondents** (more than 90%) are of the view that the decisions of those in power in government (either local or central) **never reflect their priorities**. More respondents said central government never reflected their priorities than did so for local government. The overwhelming majority of respondents did not agree with the statement, 'The local/central government cares about my opinions', and significantly more respondents disagreed with the statement for local than for central government.

There are some tentative findings that start to explain perceptions of government. First, a household's livelihood situation seems to have a consistent if weak impact on perceptions of government.

Respondents from households with more assets have more positive perceptions of local and central government. Households with **greater food insecurity have worse perceptions of local and central government**.

Second, context seems to matter only for perceptions of local government. Perceptions of safety (in moving to other places like a workplace/market/town) are significantly and positively correlated with a 'yes' response to, 'The local government cares about my opinions', and those feeling safer are more likely to say the local government's decisions largely/always reflect their priority. In other words, those **respondents who feel safe have greater trust in local government**. However, causality is unclear, and it could also be the case that those who trust local government feel safe. This is a notable finding, given that 99% of households have experienced fighting in the past three years.

There are some counter-intuitive and confusing results around the shocks experienced by households. The more shocks a household has experienced, the more likely it is the respondent feels local and central government decisions largely/always reflect their priorities. In other words, **those who have experienced shocks more generally have more positive perceptions of government**. It is not clear why this is the case, and this will have to be further explored in the qualitative fieldwork.

Fourth, there are some consistent, if weak, patterns linking **better access to some services to more positive perceptions of government**. Someone in the household receiving a social protection transfer means the respondent is more likely to have trust in central government. Respondents from households whose daughters travel further to school (i.e. have worse access) have lower trust in local and central government. Those travelling further to the closest health centre are less likely to agree the government's priorities reflect their own in some areas (as opposed to in no areas). **Experience of services, on the other hand, has no consistent impact on perceptions of government**.

Finally, the way services are being run – and having grievance processes and consultations in place – seems to matter, especially for perceptions of central government. Respondents who reported the existence of an official way to make a complaint were likely to have trust in central government. Similarly, households that reported that someone had consulted them about basic services tended to be optimistic about the local and central government.

1 Introduction

In 2012/13, the Secure Livelihoods Research Consortium (SLRC)¹ designed and implemented the first round of a panel survey in five conflict-affected countries, generating cross-country data on livelihoods, access to and experience of basic services, exposure to shocks and coping strategies and people's perceptions of governance. This paper presents the findings of the Pakistan survey, which was carried out with 2,114 households between September and October 2012. It constitutes, in effect, the Pakistan baseline report, to be followed up by a subsequent report in 2015/16 when the second round of the panel survey is complete. The analysis presented within also informs, together with the four other country papers, the first-round synthesis report.

The paper is structured as follows. Section 2 provides background to the survey, situating the panel survey in relation to the overarching themes of SLRC's research programme, outlining the objectives of the survey and presenting the analytical frameworks used to guide analysis of the survey data. Section 3 presents the survey methodology for Pakistan in greater detail, discussing the specific sampling methods used and describing basic socioeconomic/demographic characteristics of the final sample. Sections 4-6 constitute the analytical core of the paper, exploring, respectively, the livelihood status of households in our sample, and the factors that influence this; access to and experience with basic services and social protection, and the factors that influence this; and people's perceptions of governance, and the factors that influence this. Section 7 concludes with preliminary policy implications and suggestions for additional research.

¹ The SLRC is a seven-country programme coordinated by the Overseas Development Institute (ODI) and managed and implemented in Pakistan by the Sustainable Development Policy Institute.

2 Background, objectives and analytical frameworks

Khyber Pakhtunkhwa (KP) is the most severely conflict- and disaster-affected province of Pakistan. Bordering Afghanistan (see map in Section 3.2), it witnessed the Soviet–Afghan war in the 1980s, the subsequent inflow of a large number of Afghan refugees and post-war fights between armed groups during the 1990s. The ‘War on Terror’ has been ongoing since 9/11 (Waseem, 2011). During 2007, Taliban insurgents took control of some parts of the province (mainly Swat district and some adjoining areas), leading to a ferocious battle between the Pakistani army and the Taliban. During 2008/09, this caused a massive displacement of the population away from Swat and Lower Dir districts to relatively peaceful areas. In 2010, after the armed forces reinstated their control, displaced people started returning, but heavy flash floods in July 2010 made the situation worse (Government of KP and UNDP, 2011). As a response to this humanitarian crisis, the province received a large amount of international aid² for peace building and reconstruction (World Bank, 2010).

Rebuilding livelihoods and ensuring access to basic services and social protection represent core components of most of the development interventions in KP’s conflict-affected areas. However, it is imperative that development agencies and state departments have an overview of people’s livelihoods and their access to (and experience of) services and support. Given the centrality of the state-building agenda to much policy and programming in places affected by conflict, an understanding of the way people perceive a range of governance actors – the state included – is also important. Unfortunately, we know relatively little about these key issues, as good quality data are hard to come by (Shahbaz et al., 2012). In an attempt to address this evidence gap, this paper reports the results of the first round of a panel survey conducted to generate data on the livelihoods of crisis-affected households, people’s experiences regarding service delivery and individuals’ perceptions of governance actors.

This section is organised in three parts. The first gives an introduction to the survey by situating it in relation to the SLRC’s broader research agenda. The second outlines the objectives of carrying out the panel survey. The third describes the basic analytical frameworks used to analyse the survey data.

2.1 Situating the survey within the research programme

The cross-country panel survey is directly relevant to the first and third themes of SLRC’s six-year global research programme:

- 1 *Legitimacy*. What are people’s perceptions, expectations and experiences of the state and of local-level governance? How does the way services are delivered and livelihoods are supported affect people’s views on the legitimacy of the state?
- 2 *Capacity*. How do international actors interact with the state and local-level governance institutions? How successful are international attempts to build state capacity to deliver social protection, basic services and support to livelihoods?
- 3 *Livelihood trajectories*. What do livelihood trajectories in conflict-affected situations tell us about the role of governments, aid agencies, markets and the private sector in enabling people to make a secure living?

Legitimacy: people’s perceptions of governance and the role of service delivery

Establishing, building or strengthening state legitimacy is a major element of state building. The Organisation for Economic Co-operation and Development (OECD), for example, notes that, ‘State legitimacy matters because it provides the basis for rule by consent rather than by coercion’ (2010: 3).

² For details of aid inflows in conflict-affected areas, see Shahbaz et al. (2012)

Indeed, a lack of state legitimacy is seen as a major contributor to state fragility because it undermines state authority. While the steps donors can take to influence state legitimacy are few, they do have an interest in developing a clearer understanding of the following: What leads to legitimacy? What, if anything, can they do to strengthen state–society relations? What might be the (unintended) positive and negative impacts of their programming on state legitimacy if they, for example, route development funding via bodies other than the formal organs of the state?

Literature reviews carried out during SLRC’s inception year found very little evidence for the frequent assertion that improving access to services and social protection in conflict-affected situations contributes to state building (see, in particular, Carpenter et al., 2012). In the Pakistani context, there is a particularly weak evidence base on the role of aid in the processes of state building, as well as on the question of whether, or how well, livelihood support programmes and basic service delivery are addressing local needs (for details, see Shahbaz et al., 2012). Given the cited importance of legitimacy in state-building processes – as the European Report on Development (2009: 93) notes, ‘State-building efforts are bound to fail if, in strengthening institutional capacities, the legitimacy of the state is not restored’ – it is both surprising and of concern that we have so little robust knowledge about what leads to state legitimacy.

Despite these gaps, state building, encompassing both legitimacy and capacity, provides the organising framework for much international engagement in conflict-affected situations. In tackling this question, we are thus taking up the OECD’s call for donors to ‘seek a much better understanding – through perception surveys, research and local networking – of local people’s perceptions and beliefs about what constitutes legitimate political authority and acceptable behaviour’ (2010: 55).

Livelihood trajectories: tracking change and identifying determinants

Literature reviews carried out during SLRC’s inception year identified empirical and longitudinal research on livelihoods in conflict-affected situations as a key evidence gap. For instance, the Pakistan evidence paper produced by SLRC identified several gaps in the existing evidence base, such as research into the inclusion/exclusion of different social groups in terms of access to basic services and livelihood opportunities; gender-sensitive data in the context of conflict; data on market dynamics; and impact assessment of completed interventions (see, for details, Shahbaz et al., 2012). Although good in-depth case studies on livelihood strategies in particular contexts can sometimes be found, these are usually just snapshots. Qualitative case study approaches are also insufficiently linked to quantitative survey data. The literature reviews also revealed a significant gap in any comparative analysis of the effectiveness and impact of interventions to support livelihoods (see, in particular, Mallett and Slater, 2012). There are some evaluations available, and a scattering of academic literature that examines the impact of particular projects or programmes, but very little that looks at the overall significance of aid in people’s livelihoods and compares the impacts of different approaches. SLRC’s research programme aims to fill some of these gaps by building a picture of how people make a living in particular contexts, and tracking how this changes over time.

2.2 Objectives of the panel survey

The panel survey will help us answer parts of our research questions appearing under the first and third themes of the research programme.

Regarding the first theme, legitimacy, our approach is centred on documenting and analysing people’s views of governance in conflict-affected situations. It should be emphasised that we are interested here in not just the state but also a wider collection of governance actors. As such, we consider people’s perceptions of both local and central government as well as of other forms of public authority. Therefore, some obvious questions entailed asking people whether the central or local government shares their priorities, or whether local people participated in intervention-related activities. A cross-country panel survey incorporating questions about perceptions enables this, allowing us to investigate

difficult-to-measure, subjective issues such as trust and satisfaction, and providing both a comparative snapshot and a longitudinal perspective.

Under the third theme, livelihood trajectories, SLRC is undertaking rigorous, longitudinal livelihoods research. Our aim is to build a clearer and more detailed picture of how people make a living in particular contexts, to track how this changes over time and to shed light on what causes change. We want to know whether people are recovering or starting to build stronger and more secure livelihoods, are stuck in poverty or are sliding into destitution, and how the broader political, economic and security environment affects this. Implementing a panel survey that captures both the dynamics and the determinants of people's livelihoods enables this.

The SLRC cross-country panel survey therefore combines elements of both perception and livelihoods surveys, enabling a dual focus on 1) governance and legitimacy and 2) livelihood trajectories. There are five points of added value in conducting a hybrid survey of this kind:

- 1 It allows us to link perceptions directly with experiences.
- 2 It generates rare panel data in fragile and conflict-affected contexts.
- 3 It allows us to identify similarities and differences between different fragile state contexts.
- 4 It allows us to differentiate between levels of government and different forms of governance.
- 5 It generates information on livelihoods beyond simple income measures.

2.3 Analytical frameworks

Three basic analytical frameworks emerged from the survey design process. These are outlined below (and in greater depth in the synthesis paper (download from [here](#)). It should be emphasised that, because this paper is based on the first round of the survey, the analysis is not geared towards identifying and explaining changes over time (which is why we talk throughout the report about livelihood 'status' as opposed to 'trajectory'). Rather, much of the analysis focuses on producing descriptive baseline statistics and identifying possible correlations and relationships between different sets of factors. The data collected also allow us to explain variations between Nepali households across a range of outcomes.

1 Livelihood and wellbeing status

Livelihoods and wellbeing are broad concepts and cannot be captured meaningfully by a single indicator. We have chosen to measure it in two different ways by looking at:

- Household asset ownership (as a proxy for wealth);
- Food security (using the Coping Strategies Index).

In the synthesis report (SLRC, forthcoming), we argue that a number of different factors can explain variations in livelihood status. These include:

- 1 *Household factors.* These include demographic characteristics of the household, religion/ethnicity of the household and education and migration characteristics.
- 2 *Contextual factors.* These include location, indicators accounting for season, occurrence of conflict, perceptions of safety in the neighbourhood and moving to work, as well as other indicators on livelihood opportunities/constraints (e.g. availability of credit).
- 3 *Shocks experienced by a household.* These include natural disasters and economic shocks, as well as crime and conflict.
- 4 *Differential access to basic services, social protection and livelihood assistances and the quality of these services/transfers.*

The aim of the quantitative analysis is to estimate if and to what extent the above factors determine the main outcome (household assets/food insecurity).

2 Access to and experience of services, social protection and livelihood assistance

We are interested in which factors determine access to and experience of services. We measure access to services in terms of distance in minutes to the closest service provider last used (for health, education and water) and whether someone in the household has received a social protection transfer or livelihood assistance.

A number of different factors can explain variations in access to services. These include:

- 1 *Individual and household characteristics* (as discussed above);
- 2 *Contextual factors* (as discussed above);
- 3 *Shocks experienced by the household* (as discussed above);
- 4 *Implementation and performance of basic services, social protection and livelihood assistance*, for example regularity of provision and who provides the service, which may affect access to basic services, social protection and livelihood assistance.

The aim of the quantitative analysis is to estimate if and to what extent the above factors determine the main outcome (access).

We measure experience in terms of overall satisfaction with the service provided (health and education); if clean water is being provided (for water); and self-perceived impact for social protection and livelihood assistance.

In the synthesis report, we argue that a number of different factors can explain variations in experience of services. These include:

- 1 *Individual and household characteristics* (as discussed above);
- 2 *Contextual factors* (as discussed above);
- 3 *Shocks experienced by the household* (as discussed above);
- 4 *Access to basic services*. We expect that distance to basic services is likely to affect experience of services;
- 5 *Implementation and performance of basic services, social protection and livelihood assistance* (as discussed above).

The aim of the quantitative analysis is to estimate if and to what extent the above factors determine the main outcome (satisfaction with the service/transfer).

3 People's perceptions of governance and the role of service delivery

Analysis of people's perceptions of governance is more complicated. We propose that perceptions of governance be determined, as before, by individual and household characteristics, context and shocks experienced. Further factors are 1) access to basic services, social protection and livelihood assistance; 2) experience of using these; and 3) their implementation and performance.

We therefore propose that the following factors may determine people's perceptions of governance:

- 1 *Individual and household characteristics* (as discussed above);
- 2 *Contextual factors* (as discussed above);
- 3 *Shocks experienced by the household* (as discussed above);
- 4 *Access to basic services, social protection and livelihood assistance*. We expect that access to services and social protection and livelihood assistance affect perceptions of governance. In particular, not having access is likely to affect perceptions of certain governance actors;
- 5 *Experience of using basic services, social protection and livelihood assistance*. We expect that experience of using/receiving services and social protection and livelihood assistance affects perceptions of governance. In particular, having a negative experience is likely to affect perceptions of certain governance actors;
- 6 *Implementation and performance of basic services, social protection and livelihood assistance*. Implementation and performance of services and social protection and livelihood assistance may affect perceptions of governance. Waiting time, regularity and

costs in accessing services and social protection are likely to determine how individuals perceive state governance, in particular if the transfer is government-provided.

The aim of the quantitative analysis is to estimate if and how much the above factors – and in particular those relating to services – determine the main outcome (perceptions of governance).

3 Research methodology

This section first covers parts of the survey design process, highlighting some of the challenges faced, before clarifying the sampling methods used and describing the characteristics of the final sample. Socioeconomic/demographic characteristics of the sample households are also described in this section.

3.1 Research methodology

A generic survey schedule was developed and then adjusted to meet the specific research priorities as identified by the country evidence paper and consultations with different stakeholders at different levels (local, provincial and national) and to fit the country context. We did not aim to generate a system of ranking between countries. Instead, the survey was designed to allow us to identify some general trends and similarities or differences between our countries. This means we had a number of core modules (namely, the access to and experience of services modules) and some modules that were identical in all countries (notably the food security module) to allow for comparability across the different country studies. The following modules were included: basic household and individuals' information, assets, livelihood sources, food security, shocks, security shocks and access to basic services (education, health and water), social protection, livelihood assistance and governance. In Pakistan, the livelihoods module was extended to capture people's livelihood activities before, during and after the 2008/09 displacement.

The SLRC survey incorporates elements of both a livelihoods and a perception survey, which raises a methodological issue: while the ideal unit of analysis for the livelihoods survey is at the household level, for the perception survey it is at the individual level. After extensive discussion and consultation, a decision was reached to combine them in one survey, partly because of logistical and budget considerations and partly in an effort to link perceptions more directly to real and measurable changes in wellbeing. We opted to sample households, but to specifically seek out a varied range of individuals within households to avoid a strong bias of male household heads for the perception questions. For instance, 34% of the respondents were female. Fieldwork was conducted between September and October 2012 in Swat and Lower Dir districts of north-west Pakistan.

Panel surveys are particularly rare in fragile and conflict-affected contexts. Part of the reason for this is that panel surveys are at risk of attrition – that is, households dropping out of subsequent survey rounds or relocating out of the study area – and it is assumed that, because conflict often results in displacement, attrition is too high in conflict-affected situations. As a result, we substantially increased the sample to account for attrition (see Section 3.2). The first round of the panel study was conducted in 2012 and the second round will be conducted in 2015.

3.2 Sampling methods and description of sample

The sampling strategy combined purposive and random sampling at different stages in order to ensure we could make comparisons in terms of conflict-affectedness and levels of services provided, while also being able to draw statistically significant conclusions at the study/district and village level. A clustered sampling strategy was employed: in the first stage, clusters (i.e. villages) were selected; in the second stage, households within those clusters were selected.

The study level is district, and Swat and Lower Dir districts were selected purposively because of the prolonged conflict that engulfed both districts during 2007-2009. Both Lower Dir and Swat districts were almost entirely taken over by the Taliban, and the state was not present until the military operation in 2009; Lower Dir, which is adjacent to Swat, is closer to the Afghan border (see Figure 1). The second

important criterion that was used for selection of these two districts was the flood in 2010, which severely affected both.

From each of the two districts, five union councils³ were selected: three from Swat (Char Bagh, Baidara and Bar Abakhel) and two from Lower Dir (Haya Serai and Lal Qila). The union councils were selected through consultation with key informants from non-governmental organisations (NGOs) working in the area, local community organisations and government departments. The criteria used for the identification of union council were 1) conflict-affectedness and displacement of people during conflict; and 2) interventions for the rehabilitation of displaced persons and returnees.

Figure 1: The study districts (Swat and Lower Dir)



The survey attempted to achieve statistical significance at the study level (i.e. the entire sample) as well at the union council level. The statistically significant sample at the union council level was divided equally between the number of villages included in that union council. Households were randomly selected (systematic random sampling)⁴ within villages so the results are representative and statistically significant at the village level and so a varied sample was captured. It should be noted that, as the sample is not representative at the district level, wherever comparisons are made between different districts, we are referring to the sample of this survey in the district, rather than the population at large. Thus, when we say ‘in Lower Dir ...’, we mean ‘among our respondents in Lower Dir ...’.

Thus, the sample size was calculated with the aim of achieving statistical significance at the study level, considering the available budget, logistical limitations and attrition between 2012 and 2015. The minimum overall sample size required to achieve significance, given population and average household size in the districts, was calculated using a 95% confidence level and a confidence interval of 5. The sample size at the village level was again calculated using a 95% confidence level and a confidence interval of 5. Since current population data at the village level in Pakistan are not available, we estimated village-level population size by asking village elders, local community organisations and

³ The union council is the lowest tier of the administrative structure in Pakistan. Usually three to six villages make up a union council. *Tehsils* (sub-districts) consist of 10-15 union councils. Two to four *tehsils* make a district.

⁴ Within a village we first completed household listings and then applied a random start with interval of 5

councillors. Finally, the sample was increased by 20% to account for possible attrition between 2012 and 2015, so that the sample size in 2015 is likely to still be statistically significant.

The overall sample required to achieve the sampling objectives was 2,077; however, some additional households were included in the sample by the survey team, making the total sample size 2,114 households.⁵ About 34% of the respondents were females. Given the frequently low proportion of females interviewed for previous surveys in north-west Pakistan (e.g. Khan, 2009), we consider achieving this ratio a success. Table 1 shows the sample size at the district, union council and village level.

Table 1: Sample size at district, union council and village level

District	Union Council	No. of villages	Households per union council	Female respondents per union council	Male respondents per union council
Swat	Char Bagh	1	414	152	262
	Baidara	3	433	154	279
	Bar Abakhel	4	423	144	279
	Subtotal	7	1270	450	820
Lower Dir	Haya Serai	9	421	132	289
	Lal Qila	6	423	145	278
	Subtotal	15	844	277	567
	Grand total	22	2114	727	1,387
Total number of persons in all sampled households = 15,302					

3.3 Socioeconomic and demographic characteristics of the sample

This section provides an overview of the composition of households and some basic socioeconomic/demographic characteristics of the respondents and their households.⁶

3.3.1 Household composition and basic demographic characteristics

The results given in Table 2 indicate that the average household size was quite large, at almost nine members. This is because a joint family system generally prevails in rural areas of KP. Results for caste/tribe indicate that respondents had diverse castes (indeed, no fewer than 150 castes/sub-castes were reported (see Annex 1 Table 26) Some of the major castes included Swah (5%), Meyar (4.7%), Mola Khel (4.5%), Bwar Khan Khel (3.5%), Atma Khel (3.3%), Paracha (3%) and Sahibzada (3%). All apart from one household were Muslim.

Distribution of household members with respect to age group indicates that most of the members were children and youth. There were very few elderly people in the surveyed households.

Data regarding international migration (outside the country) given in Table 2 indicate that more than one-third of households had at least one member of their family who had migrated outside the country for employment. District-based comparisons indicate that sampled households in Lower Dir were more likely than those in Swat to have at least one migrant (internal and/or international). The next section discusses this trend in greater detail.

⁵ Additional households were included to ensure a 100% response rate, because some respondents did not answer all the questions and thus there were a few incomplete questionnaires.

⁶ Households are defined here as a family unit where members are living together and (more specifically) have a common economic arrangement for example a common kitchen.

Table 2: Socioeconomic/demographic characteristics of the surveyed households

Variables	Swat	Lower Dir	Overall mean
Size of household	8.57	8.68	8.61
Mean number of school-age children that are enrolled (at household level)	2.32*	2.46*	2.38
Dependency ratio ⁷	0.99	0.93	0.96
% of households with at least one international migrant	27***	44***	34
% of households with at least one internal migrant	4.4***	12.4***	7.6

Note: Asterisks indicate whether the mean for each group is statistically different from the sampled population as a whole (* significant at 10%; ** significant at 5%; *** significant at 1%). School-age children refers to children aged 5 to 16, inclusive.

Both formal (school, college) and *madrassa* (religious school) education was found in the study area. The education level of respondents and adult members (those above 14 years) is given in Table 1 in Annex 1. It can be seen that more than half of the respondents were illiterate (no education) and there were very few respondents who had more than intermediate (12 years of schooling) education. Only around 1% of respondents had been educated in a *madrassa* school⁸ (see Annex 1, Table 1).

3.3.2 Experience of conflict and other shocks

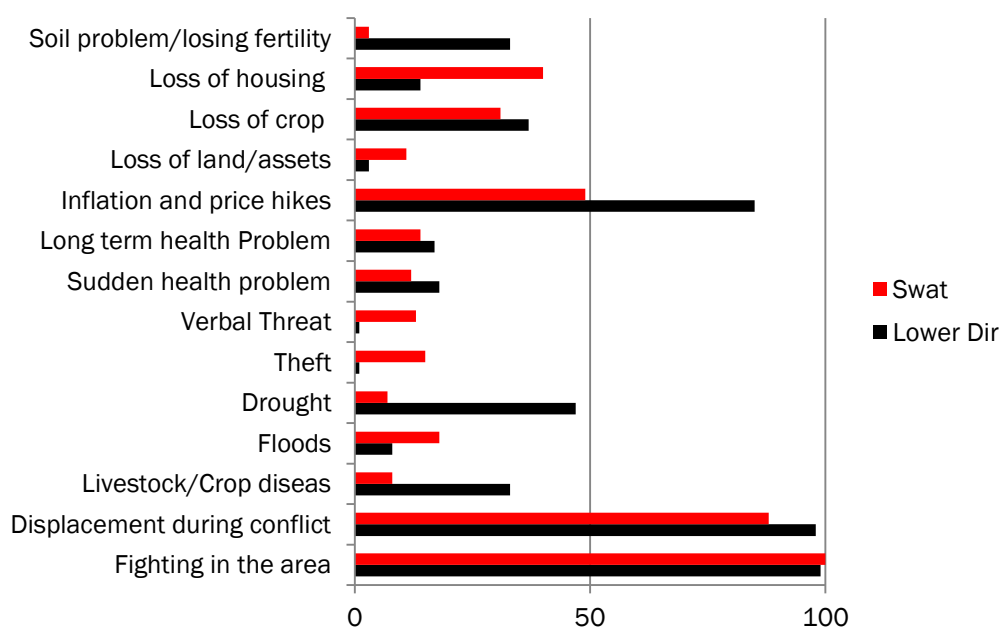
In the study areas, an overwhelming majority (about 99%) of respondents from the sampled households of both districts reported that they had experienced fighting in the previous three years, while around 90% of the households from the Swat sample and even more from Lower Dir were displaced during conflicts between the Taliban and the army (Figure 2). According to Haq (2009), a huge number of local inhabitants from Malakand division (including Swat and Lower Dir) left their native towns in anticipation of the Pakistani Army's military action against Tehrik-e-Taliban Pakistan in 2009, and most of the displaced persons returned to their homes after the war was over.

It can also be seen that a considerable percentage of households had experienced livestock/crop diseases, with incidence more common in Lower Dir than in Swat. About one-third of the households had lost livestock and houses during the previous three years. Inflation in the conflict-affected areas under sample was also frequently reported. The World Food Programme (WFP) (2010) reported that traders had increased prices during and after the conflict and thus the price of commodities had increased – this is particularly notable for households in our Lower Dir sample population.

⁷ The dependency ratio was calculated as (number of children + number of elderly)/number of adults.

⁸ Madrassa is a traditional religious school.

Figure 2: Experiences of conflicts, crimes and shocks by households in the previous three years



3.4 Summary

Our survey drew on a sample of 2,114 households from five union councils across two districts (Swat and Lower Dir) in KP. The selection of these study sites was based on two criteria: degree of conflict and crisis affectedness; and presence of aid and government after conflict or crisis intervention. Given the difference in district population sizes, approximately 40% of the households were selected from Lower Dir and 60% were taken from Swat district.⁹ Out of the total sample, 34% of respondents were females. Average household size was quite large, at almost nine members, and the average age was 24 years. The households belonged to more than 150 different castes. More than one-third of households had at least one member of their family who had migrated overseas for employment. About 92% of respondents were displaced during the conflict in 2009, and almost all households had experienced fighting in the previous three years. More than half of respondents and about 44% of all family members were illiterate.

⁹ The estimated population of Swat in 2009 was 1.82 million, and that of Lower Dir 1.03 million (Government of KP, 2011).

4 Livelihoods and wellbeing

This section presents key findings on the livelihood status of the surveyed households. Given that the concept is broad and multidimensional, it is a challenge to cover different aspects of livelihoods comprehensively (De Haan and Zoomers, 2005). For our purposes here, we describe livelihood activities and then further explore asset ownership and food insecurity as the main indicators of wellbeing.

The first of the indicators, food insecurity, is proxied using the Coping Strategies Index (see Maxwell and Caldwell, 2008). The index is a weighted sum reflecting the frequency with which households adopted particular behaviours over the course of the previous 30 days. The weights given to these coping strategies reflect their relative severity, as follows (weights in parenthesis):

- Had to rely on less preferred and less expensive food (1)
- Had to borrow food or rely on help from friends or relatives (2)
- Had to limit portion size at meal time (1)
- Had to restrict consumption by adults in order for small children to eat (3)
- Had to reduce number of meals eaten in a day (1).

Thus, a higher Coping Strategies Index score indicates a higher level of household food insecurity.

The second indicator, household wealth, is proxied by the assets owned by the household using the Morris Score Index (Morris et al., 1999). The Morris Score Index is a weighted asset indicator that weights each durable asset owned by the household by the share of households owning the asset. What this essentially means is that households are considered better off when they own assets not owned by most households in the sample.¹⁰

Livelihood activities and sources of household income are discussed in Section 4.1; Sections 4.2 and 4.3 look at household assets and food insecurity, respectively. Drawing on the findings of regression analyses, we also discuss the variables that appear to influence livelihood status and wellbeing.

4.1 Livelihood activities

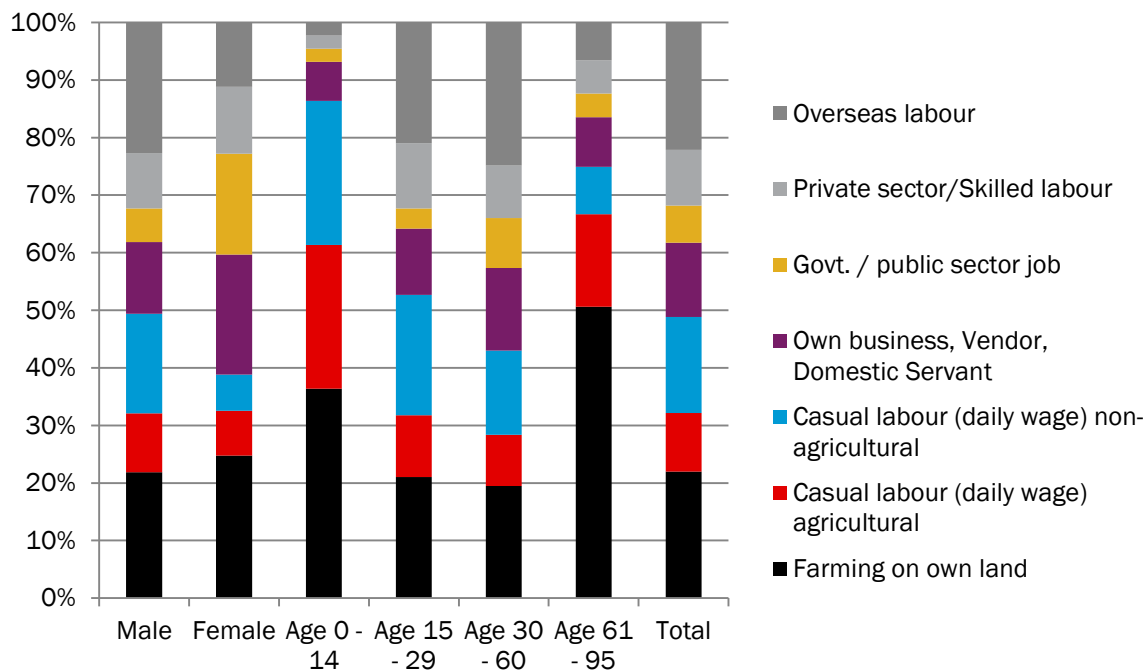
The mountainous regions of KP province (including our study area) are characterised by difficult geographical and environmental conditions and limited livelihood opportunities (Shahbaz et al., 2010). Migration is therefore considered a major coping strategy for people living in conflict-affected areas of KP (Steimann, 2005; Suleri and Savage, 2006). Females in KP have less access to financial capital as well as employment as compared with males (Siegmann and Sadaf, 2006).

Our survey asked respondents to indicate the kinds of livelihood activities (major activity) they and members of their household (over six years of age) were engaging in. The results are presented in Figure 2 and Table 2 in Annex 1 and are categorised in terms of gender as well as by age group. As shown in Table 2 in Annex 1, the overwhelming majority of females (97%) were not engaged in any paid activity. Results also indicate that 52% of male household members were not engaged in any paid activities. This number is quite large, partly because the data included all male members (aged more than six years) – thus, a considerable number of school-going children were included and possibly also because those not working for monetary pay also selected this response. However, most young household members (aged 15-30 years) and most of those aged 30-60 were also not involved in any paid activity, which shows very high incidence of unemployment in the area.

¹⁰ The items included in the list of assets used to generate the Morris Score Index are TV, DVD player, electronic fan, cassette player, mobile phone, fridge, washing machine, furniture, computer, generator, small poultry, small goats, large livestock, farming tools, motorcycle, bicycle, car/jeep, truck/tractor, animal cart, and push cart.

It can be seen from Figure 3 that farming and overseas labour were by far the most common livelihood activities for the sample as a whole (i.e. they were pursued by the most persons), but particularly for the very old and very young. Overseas labour was also recorded as one of the main livelihood activities for the overall sample; mature persons (aged 30-60 years) were the most involved. Very few household members were working as paid salaried employees in either the public or the government sector. Nyborg et al. (2012) reported that the agriculture sector had previously employed over 50% of the labour force in Swat, but during and after the conflict around one-third of these workers lost this particular source of livelihood.

Figure 3: Current livelihood activities of household members aged six years and above

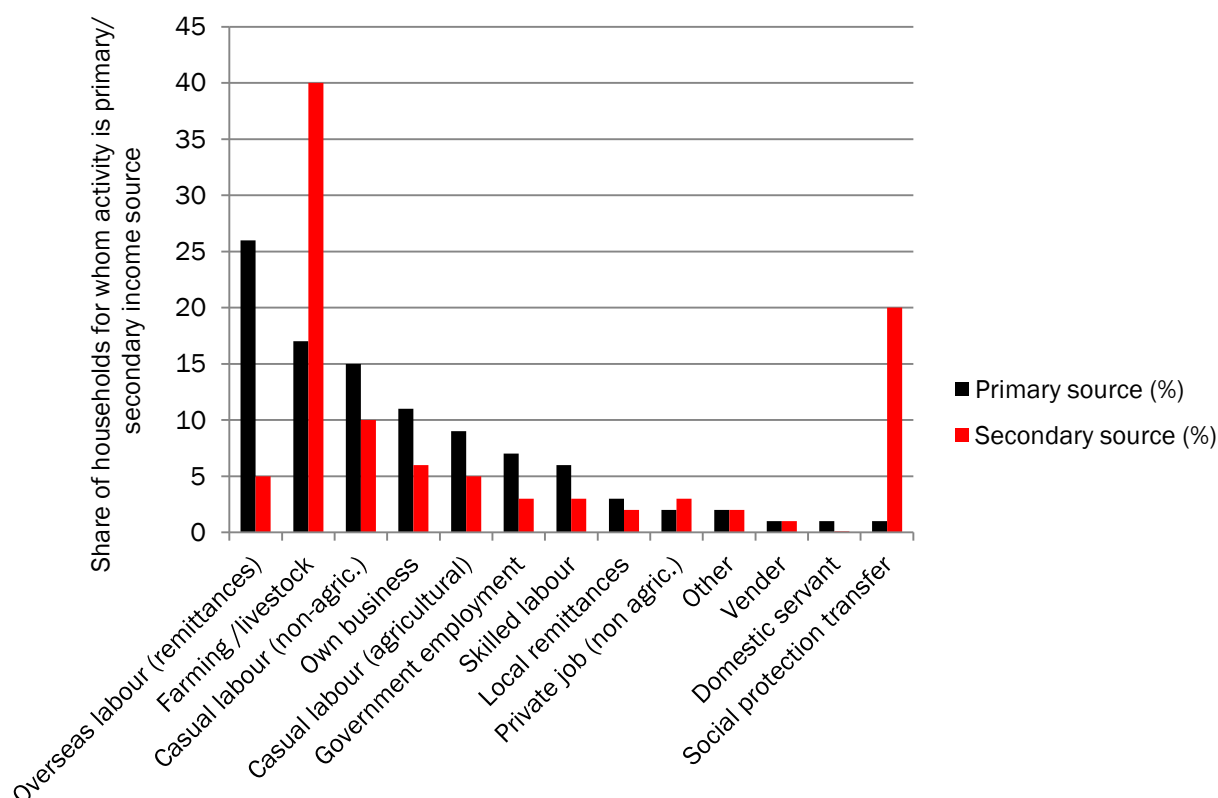


Note: The responses for 'no paid activity' are excluded from the figure, but can be found in the full table of percentages: Table 2 in Annex 1. This figure includes all individuals within the households above the age of six. Categories have been aggregated; more detail is given in Annex 1, Table 2.

It has been argued that diversification (of income sources) can help households reduce vulnerability to shocks (Ellis, 1998; 2008), but our survey findings in the conflict-affected areas of KP indicate that diversification was: (1) not particularly extensive – indeed, our data show that 34% of households relied on a single source of income, 42% on two and just 18% on three; and (2) mostly limited to a combination of agriculture and overseas labour (around one-quarter of households surveyed received an income from farming, while 17% received an income from overseas labour). Hence, there is very little livelihood diversification in our sample.

What people are doing is one thing, but how important their activities are – in terms of how much income they bring in – is another. Our survey asked respondents to identify which of the livelihood activities engaged in by household members contributed the highest (primary) and second highest (secondary) proportion of household income, keeping in mind that some households may only have one income source. Figure 4 shows that 26% of households identified overseas labour as the most important source of income – making it the most frequently reported primary source of household income – while 17% and 15% of households, respectively, identified agriculture and casual non-agricultural labour. 60% of the households interviewed reported having a secondary source of household income, with 40% of those households identifying agriculture, 20% social protection transfers and 10% casual non-agricultural labour.

Figure 4: Primary and secondary sources of household (cash) income

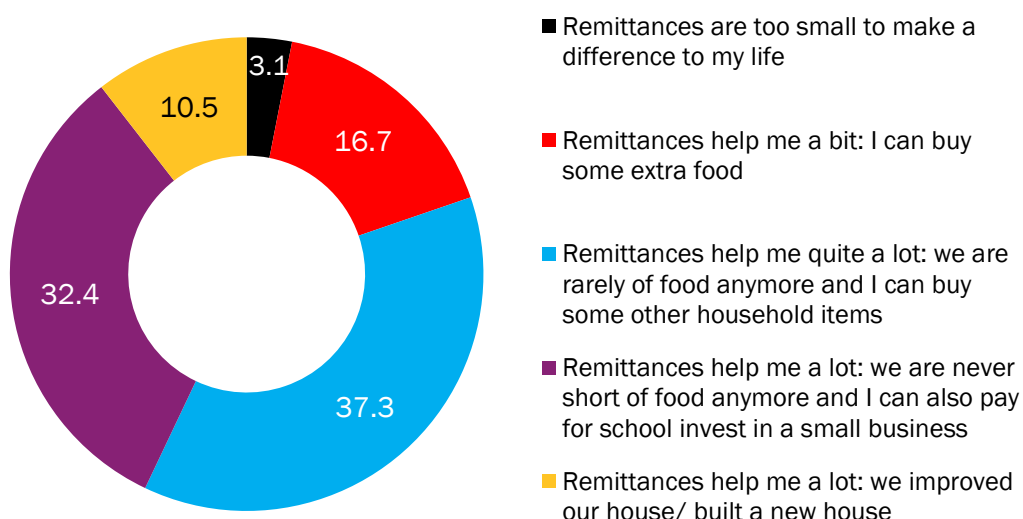


Note: The percentage for secondary sources refers only to the sample of households reporting a secondary source of income.

Thus, our survey data suggest that, even though the highest number of individuals in our sample participate in agriculture, remittances are reported as the primary source of income among the greatest share of households. This is not particularly surprising: previous studies have already confirmed that remittances generated through overseas labour constitute the main income source for people living in the conflict-affected mountainous regions of KP (Shahbaz, 2009; Steimann, 2005), and it is understood that agriculture is practised mostly as a subsistence activity in KP (Awais, 2005; Government of KP and UNDP, 2011; Steimann, 2005). However, it does appear from the above that agriculture remains an important source of cash income – indeed, for 17% and 40% of sampled households identified agriculture as either a primary or a secondary source of cash income respectively. This is an important finding for development partners interested in promoting rural livelihoods and food security in KP.

Those households that had received remittances during the previous three years were asked about the helpfulness of these. Figure 5 shows that households generally perceived remittances to be very useful. A majority agreed that the role of remittances was important, with just 3% responding that ‘remittances are too small to make a difference’ and 17% responding that they help only ‘a bit’. In fact, remittances have been an important contributor to the economy of the province generally. A report published by the Government of KP and the United Nations Development Programme (UNDP) (2011) on the Millennium Development Goals revealed that farming constituted less than 15% of monthly income in KP, with other sources of income being more important. It further found that remittances constituted 18% of the household budget in KP. The results of our study match those of Shah (2010), who found that international remittances played an important role in maintaining livelihood security in the case of disasters and shocks in Swat.

Figure 5: Role of remittances in households' livelihood status



As discussed above, farming is by far the most prevalent livelihood activity. Respondents were asked to indicate whether they or some other member of their household had experienced any problems pursuing farming. About 16% of respondents who were pursuing farming said they or their household members had experienced problems. Table 3 in Annex 1 shows the main difficulties encountered: lack of purchasing power for agricultural inputs (pesticides, fertilisers, seeds) was by far the main problem, reported by a majority of respondents, followed by poor quality of land and lack of transportation to the market. Previous research has established a strong correlation between agricultural inputs and productivity (Saleem and Jan, 2011). Applying this to our case, a lack of affordability regarding the purchase of inputs is thus the main constraint to achieving better productivity. Further, one study conducted in Swat revealed that small shops were the source of such inputs as seeds, fertilisers, pesticides and other necessary agricultural resources for farmers on a credit basis during the planting season, with repayment made at the time of harvest and marketing of farm outputs. However, because of the dramatic decline in agricultural outputs as a result of conflict, these shops have had to close, leaving farmers with greater debt and the shop owners without the resources to reopen (HOPE 87, 2010).

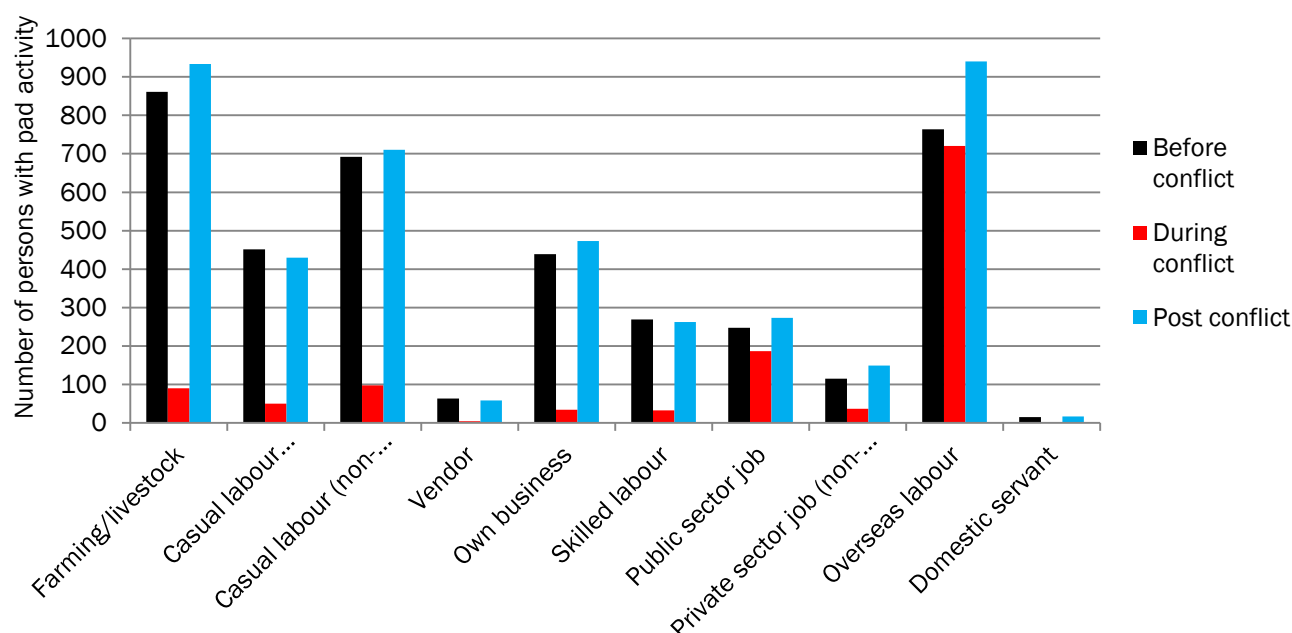
4.2 Changes in livelihood activities during and after conflict

As discussed in Section 2, the war between the Taliban and the Pakistani Army started in Swat and Dir districts during 2008-2009 and was coupled with massive displacement. Peace was reinstated during 2010 after fierce fighting. In the survey, we asked respondents about the livelihood activities of all members of their household before the conflict (i.e. before 2009), during the conflict (2009-2010) and after the conflict (the six months prior to data collection in 2012).¹¹ The results indicate that the majority of households practised farming before and after the conflict, but during the conflict most people left their area and became unemployed. Figure 6 shows changes in livelihood activities for those taking part in any paid activity, indicating no major changes before and about one year after the conflict but a drastic reduction in most activities during the conflict period. These results are quite striking, illustrating how conflict can undermine particular forms of economic activity.

Our survey data resonate with other research conducted in early 2009 by the Aryana Institute for Regional Research and Advocacy, which estimated that agricultural output losses in Swat as a result of the conflict were approximately Rs 4 billion annually in 2008 and 2009 (in Nyborg et al., 2012). In addition, while the farming sector in Swat had employed a considerable labour force, during and after the conflict around one-third of these workers lost their income (ibid).

¹¹ It may also be noted that there were severe floods in the area in 2010 and thus the results also tend to reflect the effect of disaster (in addition to conflict).

Figure 6: Changes in livelihood activities among those taking part in paid activities during and after the conflict



Note: Before conflict = before 2009; during conflict = 2009-2010; post conflict = previous six months.

4.3 Household assets

Household assets significantly influence the ability of rural people to secure and sustain their livelihoods, and it is often argued that lack of access to land and other assets leads to poverty (DFID, 2001; Geiser et al., 2011). Rural people's ownership of and access to certain livelihood assets may have a positive impact on their strategies for coping with risks (Chambers and Conway, 1992).

For our survey methodology, we took livelihood assets as an indicator of household wealth, measured by the Morris Score Index. The assets included on the index have generally similar values per unit, and we did not include land owned in the calculation. However, the correlation between Morris Score Index score and land ownership (acres) was found to be positive and significant, which implies that wealthier households (with a higher value on the Morris Score Index) possess more land, or that more land owned implies such households possess more assets.

Table 3 shows the overall average score on the Morris Score Index for sampled households in Swat (37.45) is higher than in Lower Dir district (28.58). The difference is statistically significant. This confirms Hussain's (2003b) finding that the general socioeconomic status in Swat district is better than that of Lower Dir.

Table 3: Morris Score Index scores of sampled households

	Mean	Number of households
Swat	6.68***	1,270
Lower Dir	5.43***	844
Total/average	6.18	2,114

Note: Asterisks indicate whether the mean for each group is statistically different from that of the sampled population as a whole (* significant at 10%; ** significant at 5%; *** significant at 1%).

In order to identify which variables might be influencing levels of household wealth, a regression analysis was carried out.¹² A number of variables were found to be statistically significant (see Annex 1, Table 4).

First, we find that certain household characteristics appear to determine levels of wealth, but we cannot be sure of the direction of causality in most cases. Most of the household variables show significant association with the Morris Score Index. As is to be expected, the average age of household members has a positive and significant association with the Morris Score Index, that is, households with a higher average age are likely to possess more assets. Average education (years of schooling) of adult household members also has a positive and significant association with assets. Thus, it can be inferred that having more assets means household members are able to get more education. Alternatively, it may be deduced that households with more educated members are comparatively wealthier (have more assets). The latter seems more likely, given that we were looking at physical assets.

Second, livelihood activity seems to be associated with asset ownership. Farming as the main income source has a positive and significant association with the Morris Score Index; that is, if farming is the main income source, then the household is more likely to have more assets. Farming tools are included in the Morris Score Index, so it makes sense that, if the household is involved in farming, their Morris Score Index score is likely to be higher. Households with external migrants have a significant and positive relationship with the Morris Score Index. Thus, external migration by at least one household member may lead to a higher Morris Score Index. Of course, it could also be that households with more assets are able to send at least one of their members to a foreign country. If remittances are the main income source, however, households are likely to have a lower Morris score. This implies that having a migrant is beneficial, but being dependent on the migrant is not.

Third, having experienced a shock or a crime has a positive and significant relationship with the Morris Score Index – again, this suggests either that affected households are more likely to be wealthier (potentially via the adoption of higher return livelihood activities) or that wealthier households are more likely to experience crime (for example, theft). On the other hand, households owing money are negatively correlated with the Morris Score Index. This is perhaps unsurprising, given that more vulnerable households that have borrowed money might also be likely to have fewer assets. But it may also show that people not use assets as security against credit. Whether this is a feature of conflict-affected situations is something for future research.

Interestingly, there is a positive correlation between being satisfied with health care and the Morris Score Index. It is not clear why this is the case. One explanation could be that wealthier households are able to seek better (perhaps private) health care and are therefore more satisfied. We explore the link between wealth and satisfaction with services further in the next section.

Finally, access to livelihoods assistance (that is, households receiving any form of livelihoods assistance) has a significant and positive relation with the Morris Score Index. Whether this means that livelihoods assistance has boosted household wealth, or whether in fact it is wealthier households that are more likely to access livelihoods assistance in the first place is unclear. The former interpretation gains support from the significant and positive correlation between perceived improvements in farming (owing to the receipt of seeds and tools) and the Morris Score Index – that is, respondents who felt that seeds and tools had helped increase agricultural productivity were more likely to come from wealthier households.

4.4 Food insecurity

Food insecurity was estimated by calculating Coping Strategies Index values, which give an indirect estimate of food insecurity by looking at the frequency with which households employ coping strategies of differing severity. More specifically, the index looks at the number of times households have used particular coping strategies when they cannot get enough food, and weighs these according to their

¹² In this regression model, the Ordinary Least Squares (OLS) method is carried out by taking the Morris Score Index as a dependent variable and 18 explanatory variables. The model (see Table 4 Annex 1, for the detail of regression table) has a R² of 0.235. In this regression, as well as the others in this report, we tested for multicollinearity and removed or restructured collinear variables (where applicable).

relative severity. The resulting value for each coping strategy is added to give an overall score. The coping strategies carry the following weights:

- Rely on less preferred and less expensive food: 1
- Borrow food, or rely on help from a friend or relative: 2
- Limit portion size at mealtimes: 1
- Restrict consumption by adults in order for small children to eat: 3
- Reduce number of meals eaten in a day: 1

The index was calculated by multiplying the number of occurrences for each category by the respective weight and then adding each resultant value. A higher value on the index shows higher food insecurity. Table 4 shows the results.

Table 4: Average Coping Strategies Index

District	Mean	No. of households
Swat	3.13***	1,270
Lower Dir	1.54***	844
Total/average	2.49	2,114

Note: Asterisks indicate whether the mean for each group is statistically different from that of the sampled population as a whole (* significant at 10%; ** significant at 5%; *** significant at 1%).

It is evident that incidence of food insecurity is more prevalent (mean values 3.13) among sampled households of Swat district than among those of Lower Dir district, and the difference is highly significant. Previously, a different study estimated that 54% of the population of Swat and 64% of those in Lower Dir were food insecure, pointing to both districts being food insecure (SDPI et al., 2009). The differences between these findings and ours could show that food insecurity has since increased in Swat but not in Lower Dir. Alternatively they could be explained by the fact that we have a sample that is non-representative at district level as well as differences in measurement.¹³ For example, here we estimated the Coping Strategies Index, which does not directly measure food (in)security; rather, it measures the extent to which households employ negative coping strategies to deal with food insecurity.

Consumption of nutritious and balanced food is a major indicator of food security (WFP, 2006). The data collected regarding food consumption (see Figure 2 Table 28 in Annex 1) indicate that, although grains (mostly wheat), dairy (milk) and cooking oil are consumed by most households on a daily basis, essential food items such as meat/fish, eggs and fruit are not part of the regular diet of most sampled households (perhaps because of the high price of these items).

The correlation between food insecurity and some variables of livelihood status shown in Table 5 indicates that number of income sources is inversely correlated with the Coping Strategies Index; that is, households with more income sources are, on average, less food insecure. Table 5 also indicates that number of income sources has a significant and positive correlation with the Morris Score Index. This finding suggests the importance of diversification (Ellis, 2008).

The positive correlation between the Coping Strategies Index and number of children in the house (see Table 5) leads to the hypothesis that families with more children tend to be more food insecure. These results are in line with Bashir et al. (2012), who found an inverse relationship between food security and family size in the Punjab province of Pakistan. The table also shows that number of income sources has a positive and significant correlation with number of children.

¹³ We took the sample based on the criteria of conflict affectedness

Table 5: Correlation matrix for Coping Strategies Index, Morris Score Index and some other variables.

	Coping Strategies Index	Morris Score Index	Number of income sources	Number of children in the household
Coping Strategies Index	1			
Morris Score Index	-.166**	1		
Number of income sources	-.049**	0.250**	1	
Number of children in the household	.063*	.099**	0.136**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

It is not possible to establish causality on the basis of descriptive statistics; thus, econometric analysis was carried out to enable a better understanding of which factors associated with food insecurity (see Annex 1, Table 5).¹⁴

First, some household level variables are significant. A significant association is found between the Coping Strategies Index and average education of adult household members. A negative sign of the coefficient indicates that households with higher education tend to be less food insecure. It seems as though education, or the higher incomes associated with greater education, may help households cope with food insecurity. The Morris Score Index is also significantly (but negatively) associated with the Coping Strategies Index; that is, households with more assets tend to be less food insecure, or the other way round. Households with at least one external migrant are likely to be less food insecure.

Second, number of shocks experienced by a household is significantly and positively associated with the Coping Strategies Index; that is, the more shocks a household experiences, the more food insecure it is likely to be. It could also mean that the more food insecure a household, the more likely it is to experience shocks. However, this may not owe to food insecurity alone (as indicated by the low value of the coefficient) but rather be a result of other factors, such as geography or assets. Number of crimes experienced, on the other hand, has a negative association with food insecurity, suggesting either that crime-affected households are more likely to be food secure or that food secure households are more likely to experience crimes. The latter explanation seems more likely and the finding could be linked to their assets. As we have seen above, food-secure households also tend to own more assets, which could explain why they experience more crimes.

Third, a highly significant positive association and a relatively large coefficient is observed between the Coping Strategies Index and 'owe any money/credit', which means households owing credit are more likely to be food insecure. We are not, however, able to determine the direction of causality here: it might be that owing credit results in greater food insecurity or that food insecurity compels households to borrow money.

Fourth, access to and experience of some services is significant, but not always with clear effects: distance to the health centre and source of drinking water are significantly associated with a higher Coping Strategies Index, but a negative sign indicates that the longer the journey time to the health centre, the lower the level of food insecurity. That is, food-insecure households tend to take less time to access health centres than do food-secure households. It is not clear what explains this finding. Counter-intuitively, those who are satisfied with education also have higher food insecurity.

Access to the Benazir Income Support Programme (BISP), as a measure of access to social protection, is significant and positive. This indicates that those households that are receiving a transfer from BISP tend to be more food insecure. In other words, food-insecure households are more likely to receive a grant from BISP. This indicates that BISP seems to be well targeted to the poorest.¹⁵ Access to livelihoods assistance is linked with lower food security.

¹⁴ In this regression model, the OLS method is carried out by taking the Coping Strategies Index as a dependent variable and 19 explanatory variables. The model (see Table 5 in Annex 1 for the detail of regression table) had a R² of 0.152.

¹⁵ This variable was included in another regression.

4.5 Summary

This section has looked at the livelihood status of households in our sample population in KP. More specifically, we focused on livelihood activities (including how these changed during and after conflict), levels of wealth (proxied by asset ownership), and food insecurity (estimated using the Coping Strategies Index). In addition to the noteworthy findings that emerge on each of the individual livelihood status outcome indicators, looking across the results of the statistical analysis reveals a number of key issues with respect to livelihoods in the sampled population. We note five features in particular here.

First, **farming is the most prevalent livelihood activity**, followed by overseas labour and non-agriculture-based labour. However, **overseas labour (remittances) is the primary income source for the majority** of the households. The incidence of not having paid employment is strikingly high in the study area, and there was a drastic reduction in most livelihood activities during the conflict. For instance, before the conflict farming and daily wage labour were pursued by 800 and 700 persons respectively; during the conflict fewer than 100 persons worked in each activity. However, an increase in overseas migration and farming after the conflict (compared to before the conflict) was reported, perhaps as a strategy to cope with limited employment opportunities after the conflict. This finding demands attention from the provincial and central governments, particularly in light of fears that the large population of young people – if not properly engaged – might fall into unproductive activities, particularly terrorism¹⁶ (Government of Pakistan, 2010).

Second, the results also show that **about 50% of households depend on a single source of livelihood**, even though average household size is quite large (about nine members per household). Diversification is often an essential, but not necessarily sufficient, determinant of livelihood security, and its importance has been widely discussed in the literature (Ellis, 1998). The data also indicate a positive correlation between number of income sources for a household and food security. This implies that donor interventions and public policy should facilitate diversification beyond agriculture, at the same time keeping an emphasis on supporting agricultural activities, because farming remains the major livelihood activity in the post-conflict areas under study.

Third, as is to be expected, **households with higher education tend to be both less food insecure and to have a higher asset index**. There is a significant negative correlation between food insecurity and assets, but this is not consistent across districts: **while incidence of food insecurity was more prevalent among the sampled households of Swat district than among those of Lower Dir district, the Morris Score Index is higher for the sampled households in Swat**. It is not clear what could explain this.

Fourth, **having experienced a crime has a positive and significant relationship with the Morris Score Index and a negative and significant relationship with food insecurity**. While we cannot be sure of causality, this suggests that being more food secure and having more assets implies that households experience more crimes. Experience of shocks is positively correlated with the Morris Score Index, but **number of shocks experienced by a household is significantly and positively associated with food insecurity**; that is, the more shocks a household experiences, the more food insecure it is likely to be.

Fifth, in terms of access to services and livelihoods, we found **a positive correlation between access to livelihoods assistance and a higher Morris Score Index and greater food security**. There is also a significant and positive association between improvements in farming (owing to the receipt of seeds and tools) and Morris Score Index and greater food security. Though we cannot draw conclusions on causality, it may be the case that livelihoods support has helped increase household assets and food security. This suggests that livelihood assistance is well targeted. There is a **positive correlation between receipt of the social protection transfer (BISP) and food insecurity**. It is unlikely that receipt of

¹⁶ According to Government of Pakistan (2010), unemployed youth aged 15-29 years are the main resource pool for terrorist recruitment. Fair (2008) found a similar relationship between unemployment and militancy.

BISP is making households more food insecure; rather, this suggests BISP is well targeted towards the poor.

5 Basic services, social protection and livelihoods assistance

In this section, we look at people's access to and experience of a range of basic services, including health, education, water, public transport, social protection and livelihoods assistance. As before, we provide information on how access and experience vary across the sample, before drawing on regression findings to try and explain what might be driving the variations.

We use a simple indicator of access to basic services: journey time. For health services, this means the time in minutes taken to travel to the nearest health clinic; for education, it means the time in minutes taken to travel to the primary school used by the household (we asked this separately for girls and boys); and for water, it means the time in minutes taken to travel to the water access point used by the household (if that point is located outside of the dwelling). For social protection and livelihoods assistance, at least a single member of the household accessing the service was considered access to the service. An explanation and justification of the specific explanatory variables can be found in ([SLRC Synthesis, forthcoming](#)).

In exploring experience of services, we are particularly interested in how individuals perceive the service/social protection or livelihood transfer. For basic services, we consider individual-level perceptions of satisfaction with the basic service, in both an overall sense (i.e. 'Overall, how satisfied are you with the quality of the service on the basis of your most recent use of [insert service]?') and a more disaggregated sense (by asking people about their experience with particular characteristics of a service, such as waiting times, teacher attendance, language of communication and so on). For social protection and livelihood assistance, we use perceived impact as a measure of experience. An explanation and justification of the specific explanatory variables can be found in ([SLRC Synthesis, forthcoming](#)).

Section 5.1 discusses access to basic services, social protection and livelihood assistance, and Section 5.2 experiences of households in relation to these services.

5.1 Access to basic services, social protection and livelihoods assistance

5.1.1 Health

Generally speaking, there is a lack of health facilities in KP compared with other provinces of Pakistan (Government of Pakistan, 2010). Conflict and floods have further deteriorated the situation (Government of KP, 2011). However, after the conflict there was huge investment by donor agencies in health and other sectors in conflict-affected areas (Haq, 2009). Our survey generated data on travel time to the nearest health care unit used by households (district wise), which can be seen in Table 6. The results indicate that sampled households in Swat district had to travel about 30 minutes to reach a health centre, whereas for Lower Dir district the average distance was significantly longer, at 38.45 minutes.

Table 6: Distance (in minutes) to health care unit

District	Swat	Lower Dir	Total sample
Mean (minutes)	30.6***	38.45***	33.73
Number of observations	1,270	844	2,114

Note: Asterisks indicate whether the mean for each group is statistically different from that of the sampled population as a whole (* significant at 10%; ** significant at 5%; *** significant at 1%).

To explain access to health clinics with the help of some independent variables, distance (in minutes) to travel to the nearest health facility used by households was taken as an indicator of access to health services. The multiple linear regression is presented in Regression 6 in Annex 1.

It can be seen that most household factors show a non-significant association with access to health services. However, we find that displacement during conflict shares a positive and significant association with the dependent variable, suggesting that such households tend to be located further away from a health clinic, as are households with at least one internal migrant. Bari (2010) conducted a research study with internally displaced persons from conflict-affected areas of KP and found that they were the group most severely affected by lack of health access: 58% of males and 54% of females reported a lack of access to health care facilities. Bari may have used different criteria to measure access, but – by our own measure – we also found that displaced households had worse health access.

Surprisingly, the more food insecure households are, the shorter their travel time to the health centre. It is not clear what explains this finding. One possible explanation might be that, as our results indicate, sampled households in Swat districts are more food insecure and at the same time have health centres closer to their homes (less travel time) as compared with Lower Dir. As seen in the descriptive statistics, location (district) has a significant and negative association with and a large impact (with a high co-efficient value of 5.36) on access to health. Households in Swat district tend to have better access to health centres because the district is largely valley with plain land, whereas Lower Dir is mountainous.

Satisfaction with the quality of the health service (number of qualified persons and waiting times) is also positively and significantly associated with distance travelled. This means that those households that are satisfied with quality of service tend to travel longer to get to the health clinic. In other words, it is likely that those who use comparatively nearby health centres are not satisfied with staff and waiting times. This might be explained by the argument that households that use comparatively distant health centres do so for better service. Similarly, those households that are satisfied with waiting times tend to cover more distance for health facilities; in other words, those households that use distant health centres tend to be satisfied with waiting times. Those households that participate in community meetings regarding health services also travel further. Owning a form of transportation (motorcycle, car) does not seem to make any difference regarding distances to health centres: the association is non-significant.

5.1.2 Education

Distance in minutes of the nearest primary school to the household used for boys/girls is taken as one of the indicators of access to education services. The respondents were asked to specify how much time is required to reach the nearest primary school used by their children. Their response is tabulated in Table 7 in Annex 1. The time taken is less than 10 minutes for the majority of sampled households. While girls have somewhat shorter travel distances, there are no statistically significant differences between boys and girls (see Table 7 in Annex 1). Usually, primary schools for both boys and girls are located within the vicinity of the village, but better schools are generally further away. The United States Agency for International Development, Save the Children and other bilateral and multilateral donors have made substantial investments in this regard (Government of KP, 2011). Nevertheless, Mustafa (2012) argues that, despite efforts by the government, access to education remains a huge problem for many households. Bari (2010) also concludes that the most important impact of terrorism in Malakand has been lack of access to education, as many schools (especially girls' schools) have been destroyed by the Taliban. Our findings do not confirm this, but we will have to explore this in further fieldwork, including other indicators of access to schools.

Respondents were also asked how regularly their children attended school. The results revealed that the overwhelming majority of children were attending school, with an average of 97% for boys and 98% for girls. Households whose children were attending schools were also asked whether they had to pay a formal school fee. The results indicate that, while most households do not need to pay a formal fee,

almost one-third do (29.3%). Almost all respondents reported that they did not need to pay any informal fees.

We ran a regression with 'distance in minutes to the nearest school the households use' (separately for boys and girls' primary schools) as the dependent variable. The results for multiple linear regressions are shown in Table 8 in Annex 1.

It can be seen from the table that distance (in minutes) from both boys' and girls' schools is significantly associated with many independent variables at the household level. For instance, farming as the main activity of the head of the household and also as the main income source has a positive coefficient, which means it is associated with longer journey times for boys; however, these variables are not significant for girls.

Average education of adult household members is negatively associated with journey times for boys but it is not significant when we consider girls. This means boys living in more educated households attend closer schools. Somewhat contradicting this is the positive association of the Morris Score Index with access to education (for boys). This indicates that wealthier households tend to send their male children to distant schools or, in other words, poorer households (with a lower Morris Score Index value) send their boys to nearby schools. However, for girls, the association is non-significant; that is, the Morris Score Index does not seem to make any difference regarding access by girls.

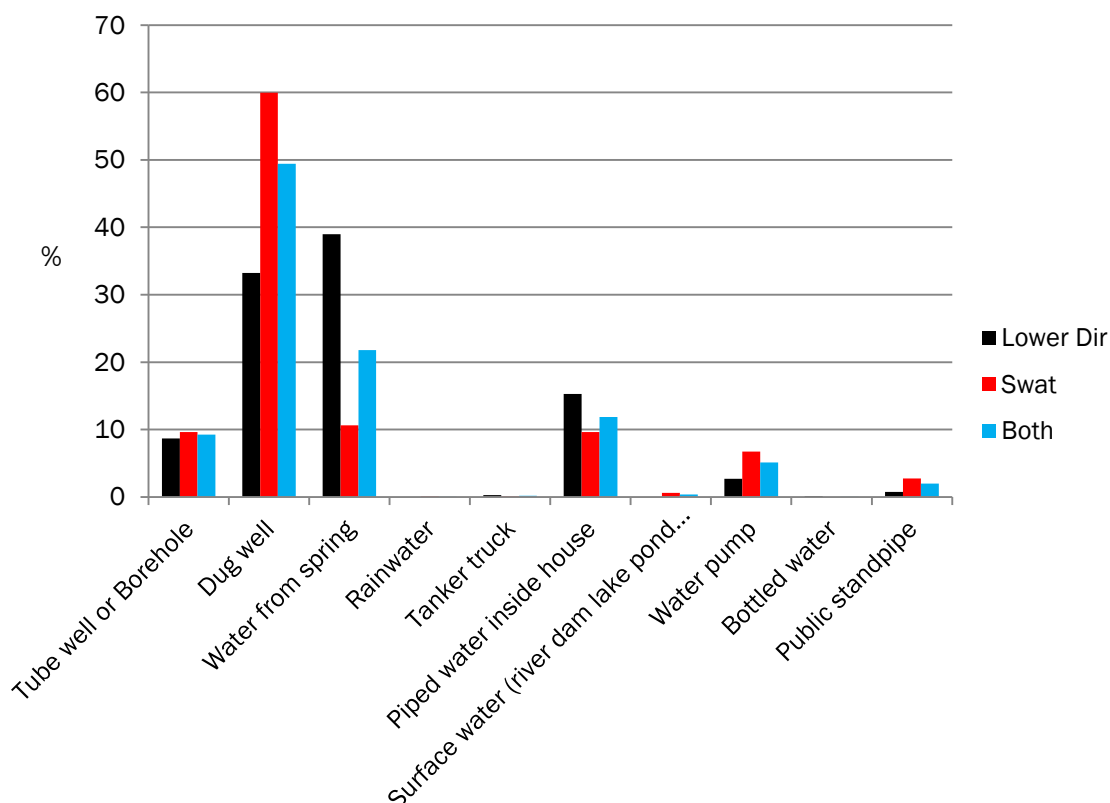
Another interesting result can be noted in relation to 'satisfaction': a significant and positive association is found between satisfaction with the number of teachers and school infrastructure and journey times to boys' schools. This can potentially be explained by the significant relationship between the Morris Score Index and journey times (that is, wealthier households use distant schools). One might deduce that such households use schools they find to be better, which happen to be located further away than nearby schools. However, non-significant results in the case of girls suggest these variables do not make any difference as far as girls are concerned, and it also does not seem to hold in terms of impact of the education of the household head.

There are a number of differences in the factors explaining access to girls' versus boys' schools. The presence of internal and external migrants in the household is negatively associated with access to girls' schools, which means that these households are more likely to send their girls to closer schools. Food insecurity is positively related to access; that is, food-insecure households use comparatively distant schools for girls, but there is a non-significant association for boys. Satisfaction with the number of teachers in girls' school is also found to be positively associated with longer journey times, as it is for boys. Households that own a car tend to send their boys to further schools, but for girls' schools owning a car does not seem to make any difference.

5.1.3 Water

Respondents were asked to indicate their main source of drinking water. Figure 7 presents the data. Dug wells were the main source for most sampled households (49.4%), with the proportion being higher in Swat (60%) than in Lower Dir (33%) (differences were statistically significant at the 1% level). A considerable number of households from the sample in both districts were using water from springs (22% for both districts). It can also be seen that very few households have access to piped drinking water inside the house. Previous data suggest piped water availability was high pre-conflict. It may be that the 2010 flood and the earlier conflict have severely damaged the water infrastructure in the study area; it will be interesting to see what changes we see between this survey round and 2015.

Figure 7: Sources of drinking water



Respondents were asked to name the institution responsible for maintaining their source of drinking water. It can be seen from Table 9 in Annex 1 that the overwhelming majority of respondents said they maintained their drinking water themselves. A modest share was maintained by NGOs/international NGOs (1%). The government maintains the water supply for slightly more than 10% of households; the community maintains a similar share.

Access to drinking water, as the outcome or dependent variable, was determined by taking the variable 'distance travelled (in minutes) to the nearest water source'. Its relationship with different independent variables is presented in the regression output¹⁷ in Annex 1, Table 10. Some indicative findings follow.

There seems to be a significant and negative correlation between average education of household members and access to water (distance travelled); that is, more educated households tend to have a water source closer to their house as compared with less educated households. This suggests that those households have piped water in the house. The household having an external migrants also has a significant, negative association with access to water; that is, households that have at least one member overseas may have a water source closer to their house as compared with those with no external migrant members.

The Coping Strategies Index is also negatively associated with access to water, which implies food-insecure households tend to have a water source closer to their house. This finding is rather unexpected, as, generally, food-secure households are comparatively wealthy and should have water sources closer to their house.

In terms of implementation, respondents who report there having been a community meeting about water are likely to come from households facing shorter journey times. Payment for drinking water, services being run by institutions other than the government, and actual participation in community

¹⁷ The extremely low value of R-square indicates that our model does not fully explain the association of explanatory variables with outcome variables, and there may be some other variables affecting this dependent variable.

meetings about water do not seem to make any difference regarding access to water (non-significant association).

5.1.4 Access to social protection

Households in the study areas received different types of social protection, including the BISP transfer, Zakat (a religious tax paid by wealthy people for poor people) from the government fund, sadqa/nazar (charity etc. from wealthy individuals), support from government-funded rural support programmes, pensions, community zakat and compensation for rehabilitation (housing). Overall, 25% of households received a social protection transfer in the past year. The results given in Figure 8 indicate that a considerable number (20%) of respondents said that at least one of their family members received support from BISP; other forms of social protection had a negligible number of recipients (less than 2%). BISP is the government's large-scale flagship social protection programme, launched as a response to high food prices. It comprises cash grants of Rs 1,000 per month, distributed every two months to women in households with a monthly income of less than Rs 6,000 (WFP, 2010).

Figure 8: Households receiving social protection in the past year (%)

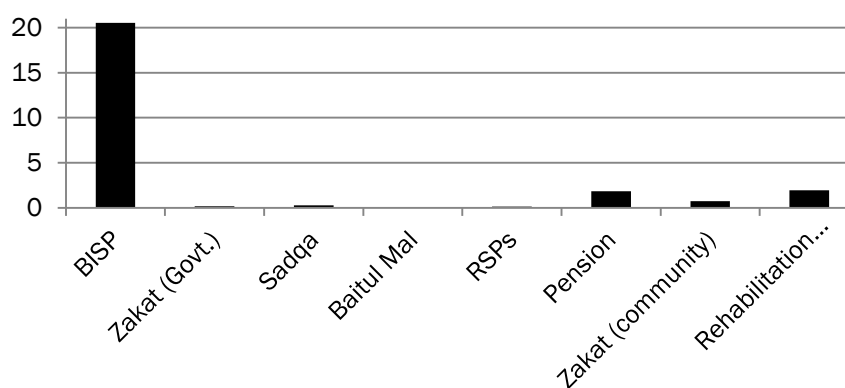


Table 11 in Annex 1 presents a correlation matrix for access to social protection. It can be seen that the number of social protection programmes a household receives is positively correlated with the number of livelihood assistance supports received and the Coping Strategies Index. That is, those households that receive more social protection also receive, on average, more livelihood support services. Similarly, the positive correlation between social protection and the Coping Strategies Index implies food-insecure households receive, on average, a greater number of social protection programmes.

As shown in Figure 8, BISP is by far the most commonly received social protection transfer in the study area. Further discussion on access is therefore focused on this. Regression 6 indicates the binary logistic regression for receipt of a social protection transfer as the outcome variable. The responses were 'yes' and 'no'; we take 'no' as the base variable.

The fairly low R-squared value and the fact that most of the variables remained non-significant for access to social protection (BISP) suggests that other factors, not explained here, may be stronger determinants of access to BISP (see Annex 1, Table 12). Surprisingly, the Coping Strategies Index has no association with receipt of a social protection transfer; that is, being more food insecure does not appear to affect access to social protection. Farming as the main activity of the head of household is significantly and positively associated with access to a transfer; that is, such households are more likely to be recipients, but if this is the main income source households are less likely to receive BISP.

There are mixed results regarding the targeting of the transfer. The Morris Score Index has a positive and significant association with (but a small effect on) access to a transfer; that is, households with more assets are more likely to be recipients of a transfer. There is a similar story for households that receive remittances, those with less education and those that experience more shocks. Hence, it is not clear if it is better-off or poorer households that are more likely to receive BISP.

By far the most significant independent variable, and the one with the largest effect size, is location. Location in Swat is significantly and positively associated with the outcome variable (access to a transfer); that is, sampled households in Swat district are more likely to be recipients than those in Lower Dir. This is rather unexpected because the overall socioeconomic indicators of Swat are better than those of Lower Dir (Hussain, 2003a), but it could be linked to BISP rollout or information campaigns.

5.1.5 Livelihoods assistance

Farming is by far the most important livelihood activity for a majority of household members, and the major secondary source of income for a majority of households (see Figure 3). The percentage of households receiving livelihoods assistance in the past year is presented in Figure 9, which shows that relatively few households receive support for farming: overall, 24% of households receive a form of livelihoods assistance. Seeds and tools distribution was the major support received (12% of households), followed by poultry (9%) and fertilisers/pesticides (7%). Agriculture extension services reached a negligible number of households (1%).

Figure 9: Households receiving livelihood assistance (%)

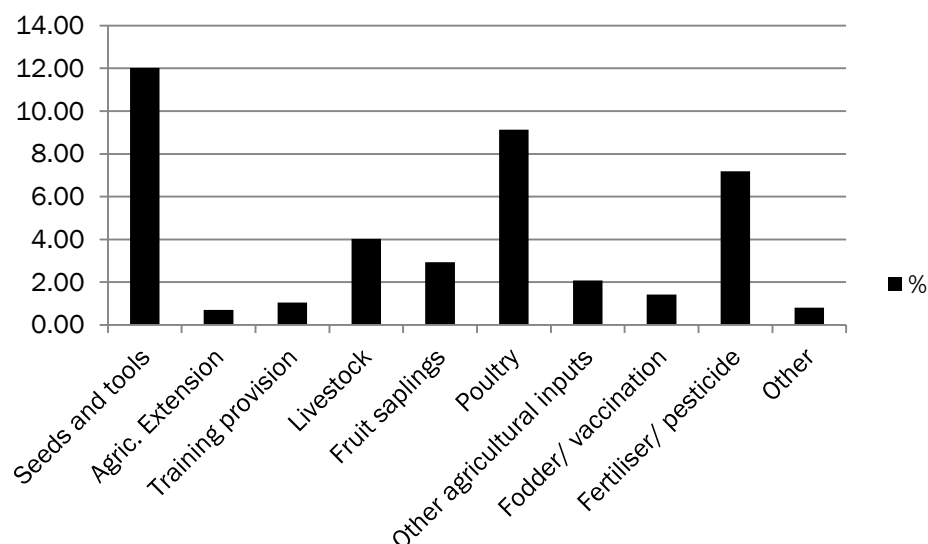
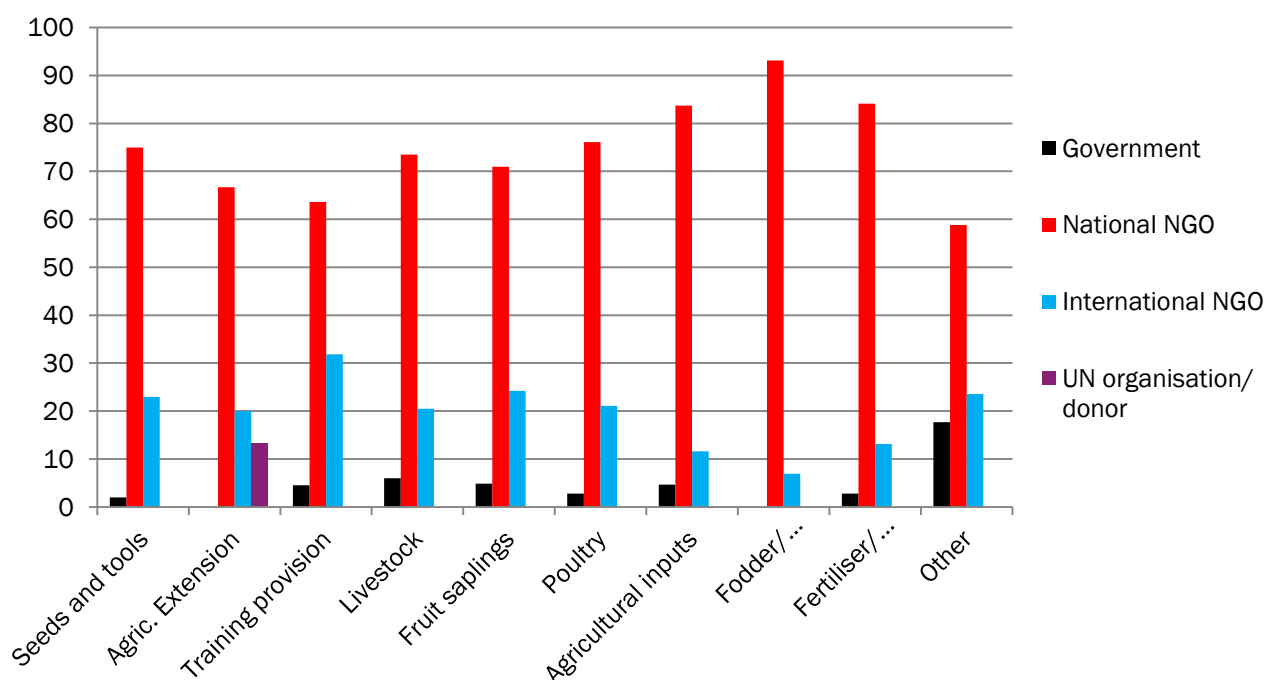


Figure 10 shows the institutions that provide livelihood assistance. It is evident that national NGOs are the most prolific provider for all types of support, followed by international NGOs. The government makes a negligible contribution, clearly indicating the state's absence in terms of livelihoods assistance provision. Many non-state actors (NGOs, donors) are active in the provision of livelihoods assistance as part of their post-conflict programming. For example, the UN and a number of bilateral donors are funding different projects through national and international NGOs for the revival of livelihoods in affected districts.

Figure 10: Who provides livelihood assistance?



To understand the determinants of livelihoods assistance receipt, a binary logit regression on receipt of livelihoods assistance (with 'no' as the base) is given in Table 13 in Annex 1. As for the access to social protection regression, the lack of significance of many of the independent variables suggests that other factors, not measured here, are more important determinants of access to livelihoods assistance.

It can be seen in the table that 'farming as the main activity of the household head' and 'farming as the largest income source' are positively related with receipt of livelihoods assistance. In other words, households that depend on farming are more likely to be recipients of livelihood support services. This makes sense, given the nature of livelihood assistance. Overseas labour as the largest income source is negatively associated with access to livelihood support; that is, households whose major income source is overseas remittances are less likely to receive livelihood support. The reason might be that such households are not dependent on farming and thus are less likely to be the recipient of such services.

Access to livelihood assistance is found to be positively correlated with the Coping Strategies Index; we cannot assess causality from this regression, but it suggests that households with greater food insecurity are more likely to be the recipients of livelihoods assistance. In addition, the number of crimes experienced by households has a significant and positive association with the outcome variable. It is not clear if households that receive livelihoods support are more likely to experience crimes, or if both are linked to another factor altogether, such as the wealth of the household. Finally, households located in Swat are again more likely to receive livelihoods assistance.

5.2 Experience of basic services, social protection and livelihoods assistance

In this sub-section, we discuss respondents' perceptions of the quality of basic services, social protection and livelihoods assistance by looking at reported levels of satisfaction. As discussed in the introduction, different perception indicators were taken to measure respondents' experiences.

5.2.1 Experiences of health services

Existing evidence suggests that health facilities in KP are characterised by a lack of medicines, equipment and other essential supplies, and were so even before the conflict (Government of Pakistan, 2010). However, during the region's post-conflict phase, many interventions have targeted the restoration of health services in Swat and Lower Dir districts (Shahbaz et al., 2012).

Respondents were asked a series of questions about their levels of satisfaction with the quality of services in the health clinics they used. Specifically, they were asked:

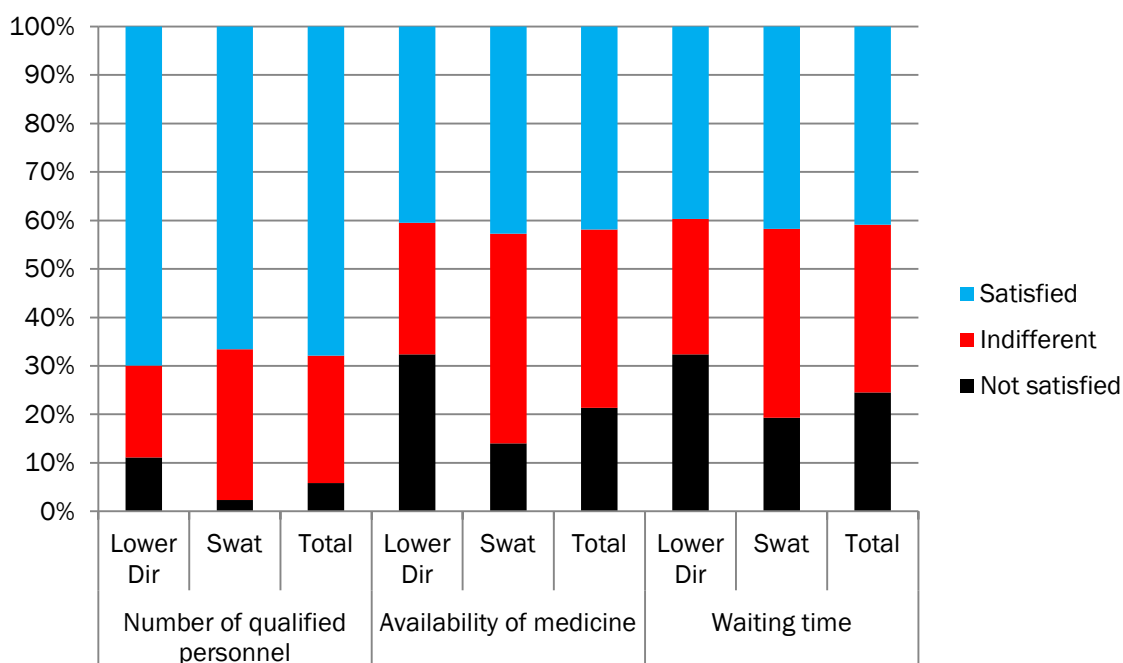
Are you satisfied with the health care facility, on the basis of your most recent use of it?

- Overall satisfaction with health services (on a scale of 1-5)
- Number of qualified personnel (on a scale of 0-2)
- Availability of medicines and equipment (on a scale of 0-2)
- Waiting time (on a scale of 0-2).

As Table 14 in Annex 1 shows, most respondents reported being satisfied with the quality of their health service. Higher satisfaction might be attributed to the massive relief and restoration work taking place after the crisis, with health one of the priority areas of interventions (Government of KP and UNDP, 2011; Haq, 2009).

It can be seen from the Figure 11 that the majority of respondents were satisfied with the number of qualified persons in the health clinic; however, a considerable number of respondents were not satisfied with the availability of medicines and waiting times, with the responses fairly similar for both districts (differences were statistically significant at the 1% level).

Figure 11: Satisfaction with quality of health care centre service



Note: See Annex 1, Table 14 for percentages.

Regression 8 (Table 15 in Annex 1) shows the relationship between a series of different independent (explanatory) variables and 'overall satisfaction with the health centre' (outcome variable). Overall satisfaction was measured on a five-point scale (very dissatisfied, dissatisfied, indifferent, satisfied and very satisfied), taking 'dissatisfied' as the base.

Results show that female respondents are more likely to report being 'very dissatisfied' with the overall quality of health clinics and less likely to report being 'satisfied' with the service.

We also find that location (Swat district) is negatively associated with the response 'very dissatisfied' but positively associated with 'indifferent' and 'very satisfied', which means respondents in Swat district are more likely to report satisfaction with the quality of health centres than those in Lower Dir district. It is possible that this is the result of the higher volume of aid interventions in Swat district as compared with other (adjoining) districts after the conflict (Shahbaz et al., 2012).

Respondents who reported being satisfied with qualified persons in the health clinic are also more likely to be satisfied with the overall quality of the health centre. Similarly, respondents satisfied with 'waiting times' and 'medicine' tend to be satisfied with the overall quality of the health centre. Services run by institutions other than the government are significantly associated with 'highly satisfied'; that is, respondents from households using private health centres are more likely to be satisfied with the service.

Another interesting result can be seen from the significant and positive association of the Morris Score Index with 'highly satisfied', suggesting that respondents from wealthier households are more likely to report being satisfied with the overall quality of health services.

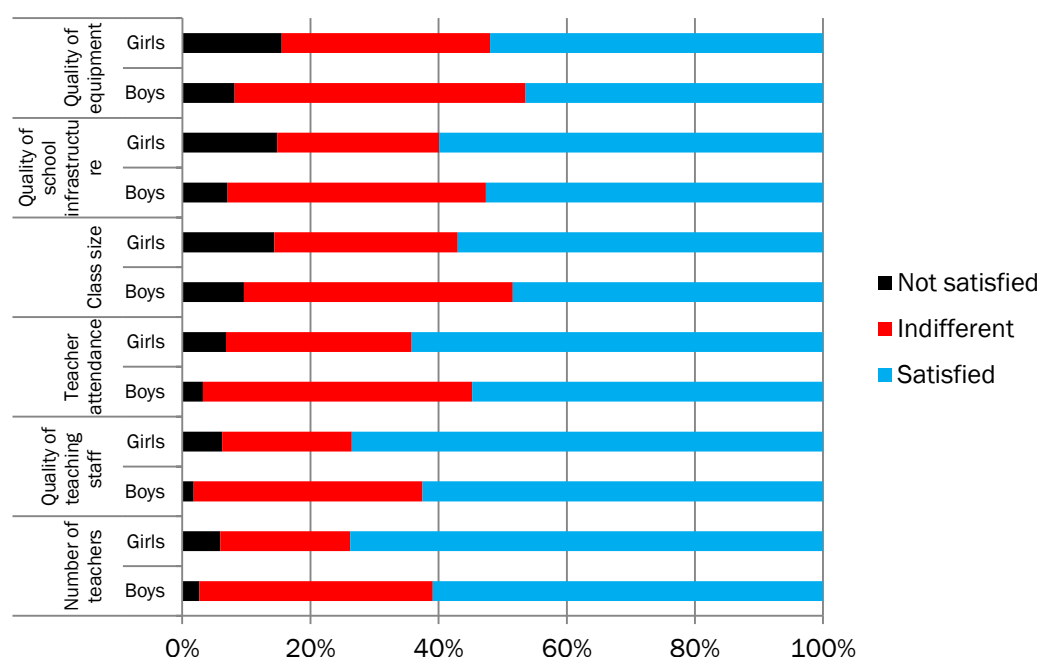
5.2.2 Experiences of education services

As with health, respondents' experiences of education services (boys' and girls' schools) were measured by asking about both overall satisfaction and particular aspects of education. Specifically, respondents were asked their satisfaction with:

- Number of teachers (on a scale of 0-2)
- Quality of teaching staff (on a scale of 0-2)
- Teacher attendance (on a scale of 0-2)
- Class size (on a scale of 0-2)
- Quality of school infrastructure (on a scale of 0-2)
- Quality of equipment (on a scale of 0-2).

The results, presented for boys and girls in Figure 12, indicate that most respondents are satisfied with different aspects of education. However, a considerable number of respondents had neutral opinions (neither yes nor no). Respondents were least satisfied with teacher attendance and quality of equipment. Comparatively more respondents were satisfied with the overall quality of girls' schools as compared with boys' schools (see Table 16 in Annex 1). There are two possible explanations for this. Households may care less about girls' education. Alternatively greater satisfaction could be the result of greater investment by the government in girls' schools as compared to boys' schools.

Figure 12: Satisfaction with the quality of service of educational institutions used by boys



Note: For percentages see Annex 1, Table 16.

To determine the respondents' overall satisfaction with education services, they were asked, 'Overall, how satisfied are you with the quality of the service on the basis of your most recent use of the school?' Most respondents were satisfied with the overall quality of education services (59% for boys' education and 59% for girls' education stated they were 'satisfied', see Table 17 in Annex 1).

In order to determine why some households were satisfied with the quality of educational services while others were not, a multinomial logit regression model was run (Regression-9, Annex 1, Table 18), taking 'overall satisfaction with the quality of schools' as the base outcome. The analyses for boys' and girls' schools were done separately. Taking 'dissatisfied' as the base, the association of different explanatory variables with overall satisfaction with school services is shown below.

Most of the household variables (average age of members, income base, remittance status, migrant status, Morris Score Index, food insecurity, displacement etc.) remained non-significant, which implies that these variables do not explain the perceptions of respondents regarding overall satisfaction with the quality of boys' and girls' schools.

The response of female respondents is significantly and positively associated with 'very dissatisfied' for girls' schools, while it is non-significant for other satisfaction levels. Thus, female respondents are more likely to report dissatisfaction than men with the overall quality of girls' schools. Similarly, we find that female respondents are also less likely to report being satisfied with the quality of boys' schools.

Location (Swat district) has a positive and significant association with 'satisfied' and 'very satisfied', which implies respondents from our sample population in Swat are more likely to be satisfied with the overall quality of schools than those in Lower Dir district. This may be attributed to the huge volume of aid in Swat as compared with other affected districts (Shahbaz et al., 2012).

Respondents from households which have experienced a greater number of shocks are less likely to report being satisfied with the quality of both boys' and girls' schools.

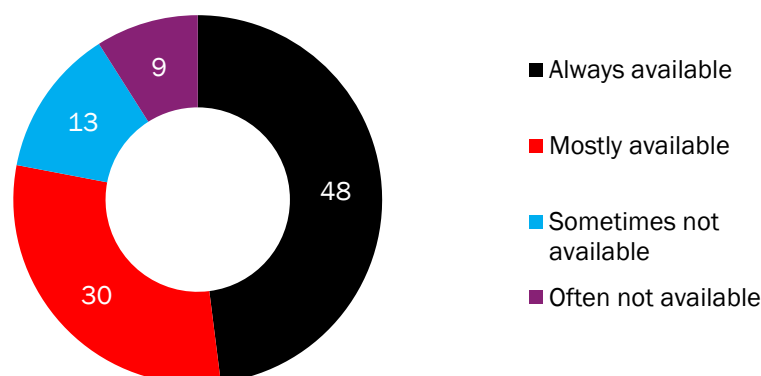
Satisfaction with the number of teachers, teacher attendance, class size and school infrastructure is positively and significantly associated with satisfaction (i.e. 'satisfied' and 'very satisfied') with the overall quality of boys' and girls' schools. This suggests that respondents who are satisfied with specific aspects of the service are also more likely to be satisfied with the overall quality of schools.

Finally, respondents from households which have to pay official fees for accessing the service are more likely to report being 'very satisfied' with the quality of boys' schools. This is likely to be an indication that households that send their boys to private schools (and hence pay official fees) are more satisfied.

5.2.3 Experience of water services

Provision of safe and clean drinking water is one of the key challenges in post-conflict regions. As mentioned in the previous section on access to water services, most households are maintaining their water sources by themselves and most of them are using dug wells as their source of drinking water. Figure 13 indicates the reliability of drinking water. It is evident that, for the majority of households (48.7%), water is always available; for 30% of households water was 'mostly' available.

Figure 13: Reliability of drinking water (%)



Respondents were asked whether they thought their water was safe and clean. Experience with water services in terms of safeness and cleanliness is expressed as a logit regression by taking ‘no’ as the base variable and the effect of several independent variables on the outcome variable (drinking water is safe and clean). Results are shown in Regression 10 (Annex 1, Table 19).

It can be seen from Regression 10 that most household variables have a non-significant relationship with the outcome variable, which means these variables make no difference to perceptions regarding the cleanliness of water.

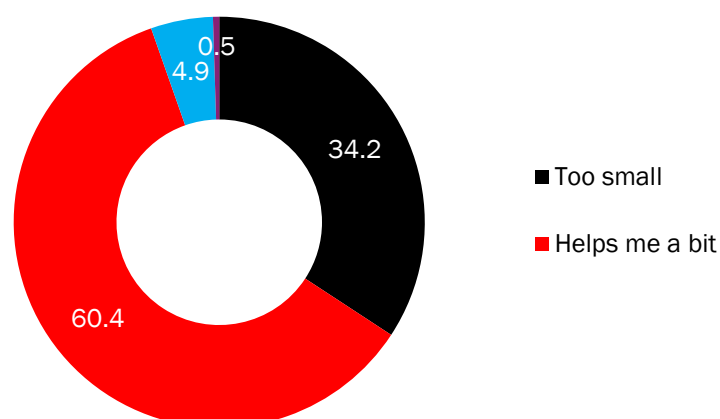
Respondents who report feeling safe while moving around are more likely to agree that their water is clean and safe. Location is also significantly and positively associated and has a relatively large effect size on the outcome variable; that is, respondents from the sample population in Swat district are more likely to be satisfied with the quality of water (safe and clean) as compared with those in Lower Dir district.

An interesting result can be noted for having to queue, which is significantly and negatively associated with quality of water. Thus, those respondents that have to queue for drinking water are less likely to agree that it is safe and clean. This is possibly closely related to the type of water source used, as those having to queue are unlikely to have a water point within their household.

5.2.4 Experience of social protection

As mentioned earlier, BISP is one of the major forms of social protection provided by the government. Among our sample population, BISP was received by more than 20% of households, whereas very few households (less than 2%) received other transfers. Under BISP, a monthly or quarterly stipend is given to female members of poor families. A total of 50% of respondents from households that received support from BISP said they always received the support on time; 35% of respondents reported receiving the support on time ‘sometimes’. Respondents were also asked about the helpfulness of the transfer received from BISP, particularly in the context of food. As Figure 14 shows, 60% of respondents from households that received the transfer from BISP said it helped them a bit and they could buy some extra food; for 34% of respondents from households that received support from BISP, the transfer was too small to make any difference.

Figure 14: Experience of social protection



Timely delivery of the social protection transfer in the right amount is an important indicator to judge the efficiency of the transfer. Responses were tabulated against the helpfulness of the transfer. Table 7 indicates that the majority of respondents from households that always received the transfer on time or received the right amount found that transfer helped 'a bit'. However, most respondents from households (80%) that never received the transfer on time and/or in the right amount felt that 'The transfer is too small to make any difference to my life'. These descriptive statistics suggest that timely delivery of the transfer is important for it to be helpful to poor households.

Table 7: Timeliness and helpfulness of BISP

Helpfulness of BISP	Always		Sometime		Rarely		Never	
	In time	Right amount	In time	Right amount	In time	Right amount	In time	Right amount
The transfer is too small to make a difference to my life	26%	30%	29%	25%	50%	50%	80%	81%
The transfer helps me a bit: I can buy some extra food	67%	64%	66%	69%	43%	33%	20%	19%
The transfer helps me quite a lot: we are rarely of food anymore and I can buy some other household items	6%	5%	5%	5%	7%	17%	0%	0%
The transfer helps me a lot: we are never short of food anymore and I can pay for school or invest in a small business	1%	0%	1%	1%	0%	0%	0%	0%
	100%	100%	100%	100%	100%	100%	100%	100%

Note: Cells have been colour-coded where deep red indicates the largest value in each row and white the lowest, with shades of light red in between. The colour-coding shows that respondents who 'rarely' and 'never' received the right amount or on time are the most likely to find that the transfer made no difference whereas those who received it 'always' or 'sometimes' reliably are the most likely to report a small benefit from the transfer.

Regression 11 (see Annex 1, Table 20) looks at the impact of BISP on households by running a multinomial logit regression on the helpfulness of BISP. The response 'The transfer is too small to make a difference to my life' is the base category, to which all other responses are compared.

The regression results show, that female respondents are more likely to agree with the statement 'The transfer helps me a bit: I can buy some extra food'. Thus, we may conclude that women respondents perceive that the transfer helps a bit in buying some extra food, compared to the base category 'transfer is too small'.

Education of the respondent has a significant but negative association with all three categories (helps me a bit, helps me quite a lot, helps me a lot). This suggests that more highly educated respondents are less likely to find the transfer helpful.

Displacement has a significant and negative association with the statement 'The transfer helps me a bit: I can buy some extra food', suggesting that respondents from displaced households are less likely to find the transfer helpful.

The Coping Strategies Index has a positive and significant correlation with 'The transfer helps me a bit: I can buy some extra food'; therefore, respondents from food-insecure households are more likely to agree that the transfer helps. The Morris Score Index is significantly but negatively associated with the statement 'The transfer helps me a lot: we are never short of food anymore and I can pay for school or invest in a small business', suggesting that respondents from wealthier households are less likely to agree that the transfer helps.

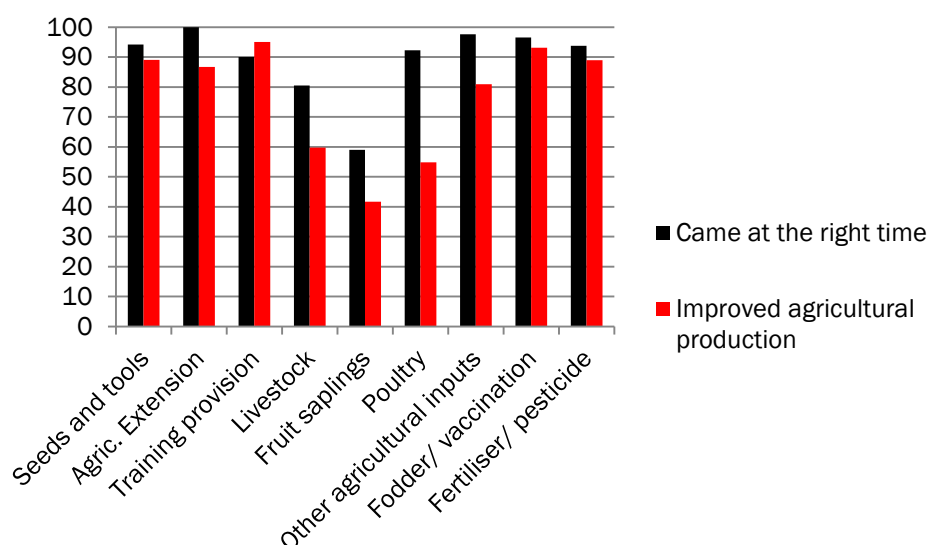
Respondents from households that have experienced a greater number of crimes are more likely to agree with the statement 'The transfer helps me a bit: I can buy some extra food', possibly suggesting their initial need is greater than those who have experienced fewer crimes.

Finally, respondents from households that received the transfer on time are more likely to agree with the statement 'The transfer helps me a bit: I can buy some extra food' compared with those who do not receive it on time. This again suggests that the way the transfer is implemented influences overall perceptions of the quality of the transfer.

5.2.5 Experience of livelihoods assistance

We noted earlier that a minority of households in the sample population actually receive livelihoods assistance, and that they mostly received it from NGOs or international organisations rather than the government. Respondents from households that received livelihood support were asked to indicate whether they received it on time and whether it improved their agricultural production. Figure 15 presents their responses.

Figure 15: % of respondents who reported that livelihoods assistance came on time (when needed) and improved agricultural production



Perceptions of the usefulness of livelihood assistance varied considerably by type of transfer, but were generally quite positive. It can be seen from Figure 14 that most respondents from households that received services said the support came on time (when needed), but with agreement as low as 50% for poultry transfers.

It is also interesting to know whether the transfer in the form of seeds/tools and fertilisers/pesticides has helped households to increase their production and see general livelihood improvements, and, if so, what the explaining variables are. We asked the households that received such support, 'Did this transfer/service improve your agricultural production/other livelihood activity?' Taking this indicator as dependent, a binary logit regression is given in Table 21 in Annex 1 with 'no' as the base variable. It can be seen that most household variables have a non-significant association with the outcome variable, but two findings stand out in both regression analyses.

The number of shocks is significantly and negatively associated with a perceived improvement in production as a result of seeds/tools and fertilisers/pesticides. This means the more shocks a household has experienced, the less likely the respondent is to agree with the statement that production has improved. This does not necessarily show that the livelihood intervention has not been helpful; it suggests that, in the face of a high number of shocks, the interventions are not sufficient to improve production.

Seeds and tools provided specifically by non-governmental agencies have a significant and positive correlation with the response 'yes' for both livelihood interventions. This means that those households that have received support from non-governmental agencies are more likely to perceive that the intervention has been helpful.

5.3 Summary

Looking across the range of services covered in this section, we can identify five key findings regarding households' access to, and respondents' experience of, basic services, social protection and livelihoods assistance in our sample.

First, in general, there are **relatively high levels of access to and satisfaction with some basic services** within our sample population, particularly for health and education. Average travel time is 34 minutes to the health centre and about 10 minutes to primary schools. Health and education, services seem to be in good shape after the conflict, possibly because of high government, NGO and international agency investments in these areas, **access to piped and safe drinking water is much lower compared with pre-conflict and pre-floods levels** (as measured in other studies). Just over 10% of households have piped water, and 20% never or rarely have drinking water available. The overwhelming majority of households maintain drinking water themselves.

Second, there seems to be a **link between journey times to the health centre or school (for boys and girls) and greater satisfaction with the service** and between greater assets and greater satisfaction with the service. For example, the data suggest that households with a higher Morris Score Index value send their male children to more distant schools and that respondents from wealthier households are also more likely to report being satisfied with the service. This suggests that **wealthier households tend to use more distant but better-quality services**.

Third, a total of **25% of households receive a social protection transfer** (of which 80% receive the BISP cash transfer), while **24% receive some form of livelihoods assistance** (12% of these receive seeds and tools).

Fourth, **there is fairly high satisfaction with the usefulness and timeliness of livelihoods assistance**. It is important to note, however, that respondents from households receiving such support from the government are likely to be less satisfied. Satisfaction with the **BISP social protection transfer is moderate** – 60% of respondents said it helped them a bit in buying extra food, but this is arguably to be expected, given the low transfer level. 34% of households thought the transfer was too small to make any difference.

And finally, although there is no consistent set of variables explaining why some respondents are more satisfied with services than others, there is some indication that **people's specific personal experiences with the service influences their overall level of satisfaction heavily**. Regression analysis of respondents' experience with both education and health suggests that factors such as 'satisfaction with the availability of medicine', 'satisfaction with the waiting time in the clinic', 'satisfaction with the

number of teachers' and 'satisfaction with the quality of the teaching staff' are strongly and positively associated with higher levels of overall satisfaction with those services. We also observe this for social protection: descriptive statistics show that the majority of respondents from households (80%) that have never received the BISP transfer on time and/or in the right amount reported that the transfer was too small to make any difference in their lives.

6 Governance

What do people in our sample think about governance in their area? Using a series of outcome indicators that measure people's trust and confidence in local and central government, we examine in this section people's experiences with, and perceptions of, governance. We focus on respondents' attitudes towards local and central government, and draw on regression analysis to suggest what might be driving negative or positive perceptions. As a backdrop to this section, it is worth pointing out that the crises in the conflict-affected areas under study have posed serious challenges to the government and the manifestations of the governance processes (Shahbaz et al., 2012).

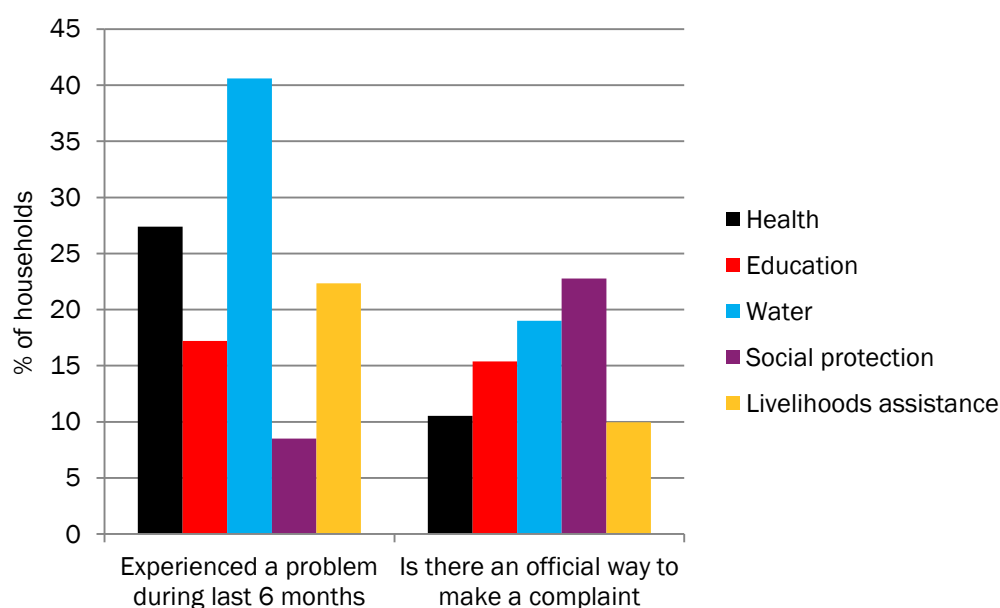
We start by looking at the accountability and responsiveness of service providers, using complaints procedures as a mechanism to explore this issue, before describing people's participation in local public meetings and decision-making processes. We then focus on respondents' attitudes towards local and central government, and draw on regression analysis to suggest what might be driving negative or positive perceptions.

6.1 Responsiveness of service providers and levels of public participation in community meetings

Service delivery can be considered a site of interaction between citizens and their state (McLoughlin and Harris, 2013), and it is in relation to public service provision that people often 'see' and experience the state. We attempt to explore this relationship by looking at two measures of state-society interaction within the realm of service delivery: whether service delivery problems experienced by the household were reported to providers; and whether households attend local public meetings regarding service provision. We later use these measures as independent variables in regression analyses of perceptions of governance to test whether these kinds of interactions are associated with more positive attitudes towards local and central government actors.

Between 10% and 40% of households had experienced a problem with a service in the previous six months, with more households experiencing problems with water services than any other service (Figure 16). Even though there is an official system for registering a complaint at the relevant government office, our results indicate that the majority of those households that had experienced problems related to basic services (health, education, water, social protection and livelihoods assistance) said there was no official way of making a complaint. It seems that most people are not aware of the system.

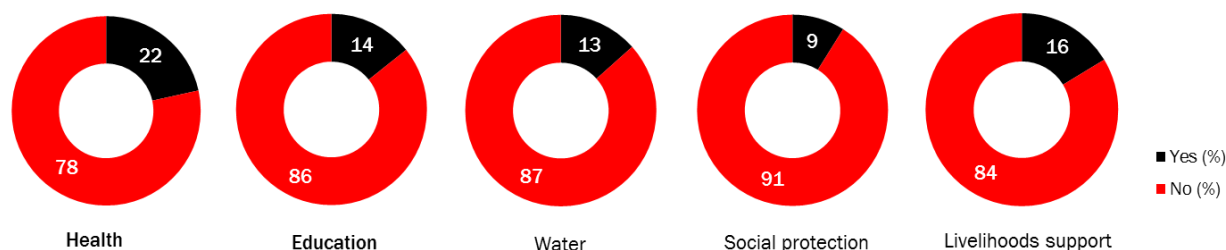
Figure 16: Percentage of total household who experienced problems with basic services and being aware of an official way to make a complaint



Those (few) respondents who had made an official complaint about basic services were asked with whom they had made it. Most had registered their complaints with the local government (see Table 27 in Annex 1); very few households had registered complaints with other institutions. For water only, a more substantial share had reported problems to other community members, which makes sense given that most water sources tend to be community-run. According to Geiser and Suleri (2010), the main challenge for the administration of aid-related interventions in crisis-affected areas of KP is the weak local government structure. Although a system of local government was introduced in Pakistan around 2001, bureaucrat administrators are currently running the local administration and there is very little room for local people's voice.

Respondents who had made official complaints to the service provider of officials were asked, 'Did the service provider respond to the complaint?' Figure 17 illustrates the relevant data. It is evident that the overwhelming majority of respondents did not receive any response from the service provider. While non-response is high across all services, for health the picture is slightly more positive: around 21% of respondents received a response to their complaint from a health service provider.

Figure 17: Did the service provider respond to the complaint?

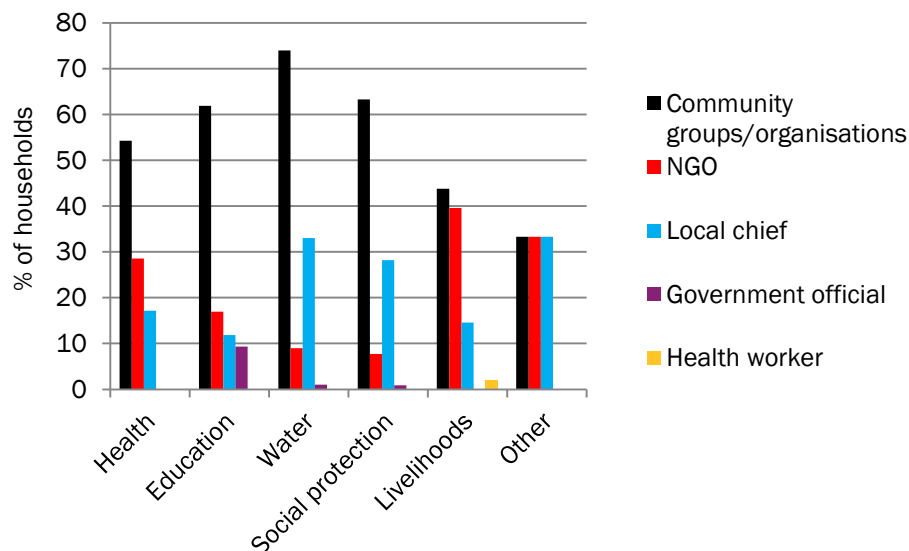


The participation of the local community in different stages of a project is often considered crucial to the success of interventions as well as to the success of governance systems (Bergh, 2004). Participation is also understood to help enhance social capital (DFID, 2001). In our survey, respondents were asked whether there had been any community meetings about new projects related to different services (health, education, water, livelihoods and social protection) in the previous 12 months. The majority of respondents (consistently more than 90%) said 'no'. Most of those respondents who said there had been community meeting about projects related to basic services during the previous 12

months reported having participated in such meetings. We asked those who did not participate why this was the case: the most frequent responses were that they were not invited to or not informed about such meetings.

We asked the (few) respondents who said they had participated in meetings who had called the meetings. Figure 18 indicates that local community groups/organisations were the most active in ensuring the participation of local people; very few of the respondents said the government or religious groups had called the meetings.

Figure 18: Who called community meetings?



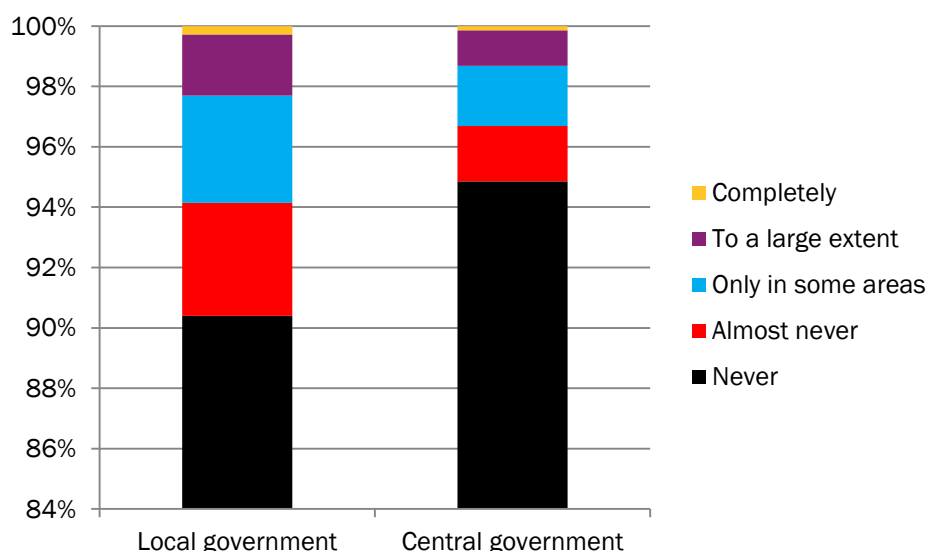
6.2 Perceptions of local and central government

Moving on to perceptions of governance actors, respondents were asked, 'To what extent do you feel that the decisions of those in power in the local/central government reflect your own priorities?' They were asked to select one of the following five options in response to the above questions: Never = 1; Almost never = 2; Only in some areas = 3; To a large extent = 4; Completely = 5.

Figure 19 presents the data, which paint a very negative picture. It can be seen that the overwhelming majority of respondents (90% for local government and 94% for central government) said that the decisions of those in power in both local and central government 'never' reflected their priorities (the difference is statistically significant at the 1% level).

These data suggest general frustration with state functionaries, which may be explained by a range of factors, including: historically rooted mistrust (Shahbaz et al., 2008); lack of participation in governance; inefficiency of the government during the floods (Geiser and Suleri, 2010); ignorance of local norms among state institutions (Steimann, 2004; Sultan-i-Rome, 2005); and failure of different rural development interventions to provide basic services in less developed regions (Hussain, 2003a; 2003b; Khan and Khan, 2001). Other researchers have highlighted weaknesses of the local government system (e.g. Zaidi, 2005). Another aspect is unequal access to (natural) resources in the mountainous areas of north-west Pakistan (Rehman, 2005) and ineffective governance of natural resources in the conflict-affected areas (Upreti et al., 2010). A local government system was introduced throughout Pakistan around 2001, but the current government abolished the system and, at the moment, responsibility lies with the local administration (the state bureaucracy). This means there is only limited room for local people's voices in terms of the priorities or processes for the delivery of services in post-conflict settings (Geiser and Suleri, 2010).

Figure 19: Perceptions regarding the extent to which the decisions of those in power in government reflect local priorities



Note: Differences between perception of local/central government are significant at the 1% level

Respondents were further asked to give their opinion on the statement, 'The local/central government cares about my opinions', with the response to be either 'yes' or 'no'. It was interesting to note that, again, more than 94% of respondents did not agree with the statement (responding 'no'). For the central government, the response was 94% disagreeing; for the local government, it was 96% (differences are significant at the 1% level).

Here, we have an important implication for state departments as well as donors. Most respondents were not optimistic about either local or provincial government. They felt that decisions made at local or higher level were not based on their need/priorities, and governments did not pay attention to their opinions. As discussed earlier, there are many reasons for general dissatisfaction and disappointment of local communities in conflict-affected areas with regard to state. It may be that all of these factors combine to produce the kind of negative perceptions of government illustrated by our survey.

The data presented above show that respondents are rather pessimistic about local as well as central government. We now explore some of the determinants of perceptions of local and central government with the help of regression analysis. As shown above, the distribution of perception is skewed, with an extremely small sample having positive perceptions. Therefore, the regressions need to be interpreted with caution.

Two types of regressions were run, for both central and local government. The first type was a logit regression with the outcome, 'Do you agree with the following statement: The local/central government cares about my opinions', with 'no' being the base category.' Given the skewed distribution and lack of variation in responses to the question 'To what extent do the decisions of those in power in local/central government reflect your own priorities?', we have restructured this variable to three categories, with 'never/almost never' being the base category and run a multinomial logit. The regression results are shown in Tables 22-25 in Annex 1.¹⁸

We draw seven main findings from the regression:

First, only a limited number of personal characteristics seem to determine respondents' perceptions of governance. Individuals who work in agriculture and casual labour seem to have more positive

¹⁸ The Pseudo R-square values for these regressions range from 0.18 to 0.21. These figures are relatively low, indicating that the selected explanatory variables do not fully explain the outcome variable.

perceptions of local government, and respondents with no paid employment have less trust in central government. Education does not have the same effect for central and local government – displaying a negative correlation in the logit regression on local government and a positive correlation in the multinomial logit regression on central government. Many other variables, for instance gender, do not seem to play a role.

Second, while many household characteristics do not seem to matter, three do to some extent. Those respondents from households with more dependants have lower trust in local government. Those respondents from households with greater food insecurity have lower trust in central government and are less likely to agree that the local and/or central government's opinion 'sometimes' reflects their own (as opposed to the priorities never reflecting their own). Those from households with a higher Morris Score Index value are more likely to agree that the local and central government's priorities largely reflect their own. Both of these variables show a fairly small effect size. This suggests that a household's livelihood situation seems to have a consistent if weak impact on perceptions of government.

Third, context seems to matter only for perceptions of local government. Perceptions of safety (being safe when moving to other places like workplace/market/town) are significantly and positively related with the response 'yes', and those feeling more safe are more likely to respond that the local government's decisions largely/always reflect their priority.

Fourth, there are some counter-intuitive and confusing results around shocks experienced. The more shocks a household has experienced, the more likely it is that the respondent feels local and central government decisions largely/always reflect their priorities. In other words, those who have experienced shocks more generally have more positive perceptions of government. It is not clear why this is the case; it could be linked to positive shock responses, which is reinforced by the positive coefficient of access to social protection (however, this is only significant in the regression on trust of central government). This will have to be further explored in the qualitative fieldwork.

Fifth, variables on access to services show some tentative links between access to services and perceptions of government. Someone in the household receiving a social protection transfer means the respondent is more likely to have trust in central government.¹⁹ Respondents from households whose daughters travel further to school have lower trust in local and central government. Those travelling further to the closest health centre are less likely to agree that the government's priorities reflect their own in some areas (as opposed to in no areas). However, none of the indicators of access are significant in all regressions; nor do they have big impacts.

Sixth, experience with a service seems to matter a little, but findings are not always consistent and some are counter-intuitive. A strong and consistent result is that respondents from households that have to queue for water have consistently worse perceptions of both local and central government. Those satisfied with personnel at the health centre are more likely to have trust in local and central government, and those satisfied with medicines are more likely to agree that the government's priorities reflect their own in some areas (as opposed to in no areas). On the other hand, those satisfied in general with the health centre are more likely to have lower trust in central government and are less likely to agree that the government's priorities reflect their own in some areas. It is not clear why.

Finally, the way services are being run – and having grievance processes and consultations in place – seems to matter, especially for perceptions of central government. Those respondents who reported that there was an official way to make a complaint (regardless of whether they did actually complain or receive a response to their complaint) were likely to have trust in local and central government or to agree with the statement that the local and central government's priorities fully reflected their own. Similarly, households that reported that someone had consulted them about basic services tended to be more optimistic about local and central government. This has a fairly strong and consistent effect.

¹⁹ This was run in a separate regression not included here.

6.3 Summary

This section has explored factors influencing people's perceptions of governance. A brief summary of the main findings is presented below.

The majority of households that have experienced problems related to basic services (health, education, water, social protection, livelihoods) **are not aware that there is an official way of making a complaint.** The overwhelming majority of respondents who have reported a complaint have not received any response from the service provider.

The vast majority of respondents (more than 90%) are of the view that the decisions of those in power at the government level (either local or central) **never reflect their own priorities.** More respondents answered that central government never reflected their priorities than did so for local government. The overwhelming majority of respondents did not agree with the statement, 'The local/central government cares about my opinions', and significantly more respondents disagreed with the statement for local than for central government. These overwhelmingly negative perceptions of central and local government are of great concern.

There are some tentative findings that start to explain perceptions of government. First, a household's livelihood situation seems to have a consistent if weak impact on perceptions of government.

Respondents from households with more assets have more positive perceptions of local and central government. Households with greater food insecurity have worse perceptions of local and central government.

Second, context seems to matter only for perceptions of local government. Perceptions of safety (in moving to other places like workplace/market/town) are significantly and positively correlated with a 'yes' response to 'The local government cares about my opinions', and those feeling more safe are more likely to respond that the local government's decisions largely/always reflect their priority. In other words, those **respondents who feel safe have greater trust in local government.** However, causality is unclear and it could also be the case that those who trust local government feel safe. This is a notable finding, given that 99% of households have experienced fighting in the past three years.

There are some counter-intuitive and confusing results around the shocks experienced by households. The more shocks a household has experienced, the more likely it is that the respondent feels local and central government decisions largely/always reflect their priorities. In other words, **those who have experienced shocks more generally have more positive perceptions of government.** It is not clear why this is the case, and this will have to be further explored in the qualitative fieldwork.

Fourth, there are some consistent, if weak, patterns linking **better access to some services to more positive perceptions of government.** Someone in the household receiving a social protection transfer means the respondent is more likely to trust central government. Respondents from households whose daughters travel further to school (i.e. have worse access) have lower trust in local and central government. Those travelling further to the closest health centre are less likely to agree that the government's priorities reflect their own in some areas (as opposed to in no areas). **Experience of services**, on the other hand, has **no consistent impact on perceptions of government.**

Finally, **the way services are being run – and having grievance processes and consultations in place – seems to matter, especially for perceptions of central government.** Respondents who reported that there was an official way to make a complaint were more likely to have trust in central government. Similarly, households that reported that someone had consulted them about basic services tended to be optimistic about local and central government.

7 Conclusions and policy implications

In 2012/13, SLRC implemented the first round of an original cross-country panel survey in Pakistan – a survey designed to produce information on:

- people's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context)
- their access to basic services (education, health, water), social protection and livelihood assistance, and
- their relationships with governance processes and practices (participation in public meetings, experience with grievance mechanisms, perceptions of major political actors).

This paper has reported on the baseline findings emerging from statistical analysis of the Pakistan first-round data. We now provide a recap of those findings. For ease and accessibility, we split this section into five: the first subsection provides some basic detail on the sample; the second to fourth revisit key findings on livelihoods, basic services and governance, respectively; and the fifth identifies research priorities to take forwards.

7.1 The survey sample

The survey was conducted in Swat and Lower Dir districts of KP between September and October 2012. Both of these districts were severely affected by violent conflicts between Pakistani armed forces and the Taliban during 2008-2009, as well by the floods in 2010, which together saw large-scale displacement of the population. After the conflict and floods, there was a massive inflow of aid geared towards the restoration of basic services and livelihoods.

A total of 2,114 households were surveyed (1,270 from Swat and 844 from Lower Dir), with 34% of respondents being female. Our data are not representative at the district level, but are representative at the village level. Our data are also statistically significant at both union council and village levels.

In the study areas, **an overwhelming majority (about 99%) of respondents** from the sampled households in both districts reported that they **had experienced fighting in the previous three years; around 90% of households** in Swat and even more in Lower Dir **had been displaced** during conflicts between the Taliban and the Pakistani Army. More than one-third of households had at least one member of the family who had migrated outside the country for employment. More than half of respondents were illiterate (no education) and very few respondents had more than intermediate (12 years of schooling) education.

7.2 Livelihoods and wellbeing

We looked here at livelihood activities (including how these changed during and after conflict), levels of wealth (proxied by asset ownership), and food insecurity (estimated using the Coping Strategies Index) among our sample population. Five key findings emerge from interpretation of descriptive statistics and regression analyses.

First, **farming is the most prevalent livelihood activity** for individuals in our sample, followed by overseas labour and non-agriculture-based labour. However, overseas **labour (remittances) is the primary income source for the majority** of households. The incidence of not having paid employment is strikingly high in the study area. Very few people have their own business, doing government or private sector jobs or working as skilled labourers. There was a drastic reduction in most livelihood activities during the conflict period. For instance, before the conflict farming and daily wage labour were pursued by 800 and 700 persons respectively; during the conflict fewer than 100 persons worked in each activity. However, an increase in overseas migration and farming after the conflict was reported.

Second, the results also show that **about 50% of households depend on a single source of livelihood**, in spite of the fact that average household size is quite large (about nine members per household). The

data also indicate a positive correlation between the number of income sources per household and food security. This implies that donor interventions and public policy should facilitate diversification beyond agriculture, while at the same time keeping an emphasis on supporting agricultural activities because farming still remains the major livelihood activity in the post-conflict areas under study.

Third, as to be expected, **households with higher average education tend to be both less food insecure and to have a higher asset index**. There is a significant negative correlation between food insecurity and assets, but this is not consistent across districts: while food insecurity is more prevalent among sampled households in Swat district, the **Morris Score Index value is also higher for these households**. It is not clear what could explain this.

Fourth, **having experienced a crime has a positive and significant relationship with asset ownership and a negative and significant relationship with food insecurity**. While we cannot be sure of causality, this suggests that being more food secure and having more assets implies that households experience more crimes. Experience of shocks is positively correlated with asset ownership, but the **number of shocks experienced by a household is significantly and positively associated with food insecurity**; that is, the more shocks a household experiences, the more food insecure it is likely to be.

Fifth, in terms of access to services and livelihoods, we found a **positive correlation between access to livelihoods assistance and both asset ownership and greater food security**. There is also a significant and positive association between improvements in farming (owing to the receipt of seeds and tools) and both asset ownership and greater food security. Though we cannot draw conclusions on causality, it may be the case that livelihoods support has helped increase household assets and food security. This suggests that livelihood assistance is well targeted. There is a **positive correlation between receipt of the social protection transfer (BISP) and food insecurity**. It is unlikely that receipt of BISP is making households more food insecure; rather, the correlation suggests BISP is well targeted towards the poor.

7.3 Access to and experience of basic services

Our survey asked respondents about access to services as well as their experiences of using them. Again, five key findings emerge.

First, in general, there are **relatively high levels of access to and satisfaction with some basic services** within our sample population, particularly for health and education. Average travel time is 34 minutes to the health centre and about 10 minutes to primary schools. Health and education, services seem to be in good shape after the conflict, possibly because of high government, NGO and international agency investments in these areas, **access to piped and safe drinking water is much lower compared with pre-conflict and pre-floods levels**. Just over 10% of households have piped water, and 20% never or rarely have drinking water available. The overwhelming majority of households maintain drinking water themselves.

Second, there seems to be a **link between journey times to the health centre or school (for boys and girls) and greater satisfaction with the service** and between greater assets and greater satisfaction with the service. For example, the data suggest that households with a higher Morris Score Index value send their male children to more distant schools and that respondents from wealthier households are also more likely to report being satisfied with the service. This suggests that **wealthier households tend to use more distant but better-quality services**.

Third, a total of **25% of households receive a social protection transfer** (of which 80% receive the BISP cash transfer), while **24% receive some form of livelihoods assistance** (12% of these receive seeds and tools).

Fourth, **there is fairly high satisfaction with the usefulness and timeliness of livelihoods assistance**. It is important to note, however, that respondents from households receiving such support from the government are likely to be less satisfied. Satisfaction with the **BISP social protection transfer is moderate** – 60% of respondents said it helped them a bit in buying extra food, but this is arguably to be expected, given the low transfer level. 34% of households thought the transfer was too small to make any difference.

And finally, although there is no consistent set of variables explaining why some respondents are more satisfied with services than others, there is some indication that **people's specific personal experiences with the service influences their overall level of satisfaction heavily**. Regression analysis of respondents' experience with both education and health suggests that factors such as 'satisfaction with the availability of medicine', 'satisfaction with the waiting time in the clinic', 'satisfaction with the number of teachers' and 'satisfaction with the quality of the teaching staff' are strongly and positively associated with higher levels of overall satisfaction with those services. We also observe this for social protection: descriptive statistics show that the majority of respondents from households (80%) that have never received the BISP transfer on time and/or in the right amount reported that the transfer was too small to make any difference in their lives.

7.4 Perceptions of governance

In order to examine people's relationships with governance actors, our survey generated information on respondents' interactions with and perceptions of local and central government.

Data show that **the vast majority of respondents** (more than 90%) are of the view that the decisions of those in power in government (either local or central) **never reflect their priorities**. More respondents said that central government never reflected their priorities than did so for local government. The overwhelming majority of respondents did not agree with the statement, 'The local/central government cares about my opinions', and significantly more respondents disagreed with the statement for local than for central government.

There are some tentative findings that start to explain perceptions of government. First, a household's livelihood situation seems to have a consistent if weak impact on perceptions of government.

Respondents from households with more assets have more positive perceptions of local and central government. Households with **greater food insecurity have worse perceptions of local and central government**.

Second, context seems to matter only for perceptions of local government. Perceptions of safety (in moving to other places like workplace/market/town) are significantly and positively correlated with a 'yes' response to 'The local government cares about my opinions', and those feeling more safe are more likely to respond that the local government's decisions largely/always reflect their priority. In other words, those **respondents who feel safe have greater trust in local government**. Causality is unclear, however, and it could also be the case that those who trust local government feel safe. This is a notable finding, given that 99% of households have experienced fighting in the past three years.

There are some counter-intuitive and confusing results around the shocks experienced by households. The more shocks a household has experienced, the more likely it is that the respondent feels local and central government decisions largely/always reflect their priorities. In other words, **those who have experienced shocks more generally have more positive perceptions of government**. It is not clear why this is the case, and this will have to be further explored in the qualitative fieldwork.

Fourth, there are some consistent, if weak, patterns linking **better access to some services to more positive perceptions of government**. Having someone in the household receiving a social protection transfer means the respondent is more likely to have trust in central government. Respondents from households whose daughters travel further to school (i.e. have worse access) have lower trust in local and central government. Those travelling further to the closest health centre are less likely to agree that the government's priorities reflect their own in some areas (as opposed to in no areas). **Experience of services**, on the other hand, **has no consistent impact on perceptions of government**.

Finally, the way services are being run – and having grievance processes and consultations in place – seems to matter, especially for perceptions of central government. Respondents who reported that there was an official way to make a complaint were likely to have trust in central government. Similarly, households that reported that someone had consulted them about basic services tended to be optimistic about the local and central government.

7.5 Moving forwards: areas for further research

The restoration of livelihoods is one of the four strategic pillars on which Peace Building Strategy rests (Government of Pakistan, 2010). Inadequate livelihoods and the absence of sufficient employment opportunities in the Federally Administered Tribal Area and KP are identified as important drivers of conflict. The Post Crisis Need Assessment (PCNA) conducted by Government of Pakistan (2010) highlights the disruption of social capital, general lack of human and financial capital, and even less physical capital as main challenges and these are considered some of the key drivers of crisis and militancy. Given the historic role of agriculture and livestock, these two sectors are identified by PCNA as major employment generation and livelihood strategies.

Our future qualitative research will be focused on exploring the local dynamics of livelihoods in pre-conflict and post-conflict context and mapping donor interventions (particularly related to the agricultural sector). It is anticipated that the further research will generate a deeper understanding of how conflict-affected people make their livelihoods choices, and which policies, processes and institutions support them in their pursuit.

More specifically, we will be focusing on the following research questions during the coming phase of qualitative research:

- 1 How are international and national organisations supposed to support livelihoods, providing services and social protection in the conflict-affected areas?
- 2 To what extent, are livelihood related interventions in the conflict-affected areas addressing the local needs? And which social groups are able to access the services/benefits of the interventions and who is excluded?

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Table 1: Education level of respondents and all household members

Education Level	Respondents		All members age > 14	
	N	%	N	%
Some primary	65	3.1	379	3.3
Finished primary	154	7.3	804	7
Some secondary	109	5.2	652	5.7
Finished secondary (8 th grade)	149	7	897	7.8
High (10 th grade)	245	11.6	1702	14.9
Intermediate (12 th grade)	131	6.2	951	8.3
Bachelor	78	3.7	445	3.9
University	65	3.1	316	2.8
Vocational	16	0.8	143	1.3
Madrassa	19	0.9	138	1.2
No education	1083	51.2	5006	43.8
Total	2114	100	11433	100

Table 2: Activity, by gender and age

Activities	Gender		Age (years)				Total
	Male	Female	Age 0 - 14	Age 15 - 29	Age 30 - 60	Age 61 - 95	
Farming on own land	883	51	16	329	466	123	934
%	11	1	0	6	9	17	6
Casual labour (daily wage) agricultural	414	16	11	168	212	39	430
%	5	0	0	3	4	5	3
Casual labour (daily wage) non-agricultural	697	13	11	328	351	20	710
%	8	0	0	6	7	3	5
Vendor: selling goods	55	3	0	14	43	1	58
%	1	0	0	0	1	0	0
Own business	442	31	2	164	287	20	473
%	5	0	0	3	6	3	3
Domestic servant	7	9	1	2	13	0	16
%	0	0	0	0	0	0	0
Govt. / public sector job	237	36	1	55	207	10	273
%	3	1	0	1	4	1	2
Private sector job (non agric.)	137	12	0	67	81	1	149
%	2	0	0	1	2	0	1
Overseas labour	917	23	1	328	595	16	940
%	11	0	0	6	12	2	6
Skilled labour	250	12	1	111	137	13	262
%	3	0	0	2	3	2	2
No paid activity	4336	6721	3901	4107	2549	500	11057
%	52	97	99	72	52	67	72
Total	8375	6927	3945	5673	4941	743	15302

Table 3: Barriers to agriculture

Problem	Frequency	Percentage
Unable to afford inputs	97	59.15
Poor quality/ not enough land	32	19.51
Lack of transportation	11	6.71
Security (violence/ robbery)	1	0.61
Insufficient irrigation water	18	10.98
Nowhere to sell	2	1.22
Intermediary buyers pay little	3	1.83
Total	164	100

Table 4: Morris score OLS regression

Regression 1		
Model: Multiple Linear Regression		
Dependent variable: Morris Score Index		
	Coefficient	Std. Error
Average age of the household members	0.127	-0.0943
Avg. education of adult household Members	2.052***	-0.216
Farming is the main activity of the head of HH	9.449***	-1.882
Overseas labour is largest income source	-7.348***	-2.414
At least one HH member is external migrant	9.536***	-3.025
HH received remittances during past 3 years	4.191	-2.553
Dependency ratio	-1.046	-0.894
HH ever displaced	1.64	-2.285
Perception of safety (moving outside)	-6.414***	-1.733
Location: Swat (reference: Lower Dir)	4.487***	-1.645
Household owes any money/credit	-10.55***	-1.348
Total shocks	6.731***	-0.765
Total crimes	3.306***	-1.014
(Distance to Health centre	0.0209	-0.0207
HH received any social protection service	0.628	-1.477
HH received any livelihood service	8.423***	-1.544
Respondent is satisfied with the quality of health centre	6.058***	-1.526
Quality of water (dummy: water is clean and safe)	-2.519	-2.458
Constant	16.39***	-5.416
Observations	2,085	
R-Squared	0.235	

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 5: Food insecurity index OLS regression

Regression 2		
Model: Multiple Linear Regression		
Dependent variable: Food Insecurity Index		
	Coefficient	Std. Error
Average age of the household members	-0.0228	-0.0155
Avg. education of adult household Members	-0.221***	-0.0361
Farming is the main activity of the head of HH	-1.045***	-0.31
Overseas labour is largest income source	-0.515	-0.397
At least one HH member is external migrant	-1.161**	-0.497
HH received remittances during past 3 years	0.538	-0.419
Dependency ratio	0.313**	-0.147
Morris Score Index	-0.0130***	-0.00361
HH ever displaced	0.0609	-0.375
Perception of safety (moving outside)	0.243	-0.285
Location: Swat (reference: Lower Dir)	1.760***	-0.27
Household owes any money/credit	1.393***	-0.224
Total shocks	0.294**	-0.128
Total crimes	-0.455***	-0.167
Access to health (Distance to Health centre)	-0.0157***	-0.0034
HH receives BISP	0.650***	-0.242
HH received any livelihood assistance	-0.448*	-0.255
Respondent is satisfied with the quality of health centre	0.720***	-0.251
Quality of water (dummy: water is clean and safe)	-0.27	-0.403
Constant	2.529***	-0.89
Observations	2,085	
R-Squared	0.152	

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 6: OLS regression of access to health centre**Regression 3****Dependent variable: Access to Health Services (No of minutes to health centre used)****Model: Multiple linear regression**

Model	Outcome Variables ¹	Coefficient	Std. Error	t-statistic	p-value
HH Factor	Constant	4.504	8.627	0.522	0.602
	Respondent is female	1.295	1.32	0.981	0.327
	Average age of the HH members	-0.075	0.098	-0.768	0.442
	Farming as main activity of the head of HH	0.838	5.761	0.145	0.884
	Farming as largest income source of HH	2.043	1.953	1.046	0.296
	Overseas labour as largest income source of HH	3.163	2.435	1.299	0.194
	Average education of the adult HH members	-0.151	0.233	-0.646	0.518
	At least one HH member is internal migrant	8.034*	3.162	2.54	0.011
	At least one HH member is external migrant	-2.278	3.912	-0.582	0.56
	HH receive remittances	0.294	3.739	0.079	0.937
	HH displaced during conflict	7.55***	2.274	3.322	0.001
	Dependency ratio	0.385	0.926	0.416	0.678
	Food insecurity index	-.731***	0.137	-5.318	0
	Morris index	0.021	0.025	0.849	0.396
	HH have own motor cycle	-3.997	2.567	-1.557	0.12
	HH have own car	1.429	2.272	0.629	0.529
Context	HH effected by conflict in past 3 years	2.255	2.428	0.929	0.353
	Feel safe while moving to workplace, market etc.	1.16	1.823	0.636	0.525
	Location (dummy: district Swat)	-5.570***	1.674	-3.327	0.001
Shocks	HH experienced shocks (total shocks past 3 years)	-0.421	0.815	-0.516	0.606
	HH experienced crimes (total crimes past 3 years)	-3.607***	1.048	-3.441	0.001
Access to Basic Services	Satisfied with number of qualified persons (health centre)	4.409***	1.24	3.557	0
	Satisfied with availability of medicine	0.139	1.16	0.12	0.905
	Satisfied with waiting time	2.949***	1.01	2.919	0.004
	Paid official fees/formal cost to access health service	-1.765	2.06	-0.857	0.391
	Paid informal fees to access health service	-0.21	4.182	-0.05	0.96
	Health service is not run by govt.	2.734	1.929	1.418	0.156
Governance	There has been community meeting (health)	11.108** *	2.394	4.64	0
	Respondent participated in community meeting	16.987*	7.033	2.415	0.016
	R Square: 0.085*; Number of Observation 2114				

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 7: Distance (in minutes) to Nearest Primary School used

¹ Following independent variables were not included in the analysis due to very low observations: Female headed households; urban/rural status. Coping strategies were also not taken as independent variable because of low observations and also because we calculated total number of crimes/shocks rather than taking individual cases

School (differences not statistically significant)	Frequency	Mean (minutes)
Boys' Primary School (Swat)	1,270	9.81
Girls' Primary Schools (Swat)	1,270	8.15
Boys' Primary School (Lower Dir)	844	10.08
Girls Primary Schools (Lower Dir)	844	7.73
Total average distance schools	2,114	8.95

Table 8: OLS regression of access to schools used by boys and girls

Regression 4									
Model: Multiple Linear Regression									
Dependent variable: Access to education (distance to primary schools used by boys & girls; in minutes)									
		Boys School				Girls school			
	Outcome variables ²	Coefficient	Std. Error	p-value	p-value	B	Std. Error	p-value	p-value
HH Factor	Constant	10.31***	3.391	3.043	0.002	19.0***	2.239	8.508	0
	Respondent is female	0.507	0.549	0.924	0.356	0.407	0.357	1.14	0.254
	Average age of the HH members	-.359***	0.041	-8.78	0	-.060**	0.027	-2.205	0.028
	Farming as main activity of the head	5.263*	2.4	2.192	0.028	0.792	1.562	0.507	0.612
	Farming as largest income source of HH	2.007**	0.812	2.472	0.014	0.25	0.529	0.472	0.637
	Overseas labour as largest income source of HH	0.789	1.013	0.778	0.437	-0.528	0.658	-0.801	0.423
	Average education of the adult HH members	-.212**	0.099	-2.15	0.032	-0.001	0.063	-0.012	0.991
	At least one HH member is internal migrant	-0.569	1.309	-0.435	0.664	-1.999**	0.85	-2.353	0.019
	At least one HH member is external migrant	-0.549	1.627	-0.338	0.736	-1.796**	1.056	-1.701	0.089
	HH receive remittances	0.327	1.552	0.211	0.833	1.408	1.009	1.395	0.163
	HH displaced during conflict	-0.556	0.945	-0.589	0.556	-0.608	0.615	-0.988	0.323
	Dependency ratio	1.867***	0.386	4.833	0	-0.215	0.255	-0.84	0.401
	Food insecurity index	0.053	0.057	0.925	0.355	.138***	0.037	3.72	0
	Morris index	.025**	0.01	2.394	0.017	0.009	0.007	1.291	0.197
	HH has own motor cycle	-1.345	1.069	-1.259	0.208	-0.109	0.694	-0.157	0.875
	HH has own car	2.194**	0.945	2.322	0.02	0.468	0.614	0.763	0.445
Context	HH affected by conflict in past 3 years	-1.997**	1.009	-1.98	0.048	-0.806	0.656	-1.228	0.22
	Feel safe while moving to workplace, market etc	-1.580**	0.752	-2.102	0.036	0.356	0.49	0.728	0.467
	district Swat	-1.310**	0.695	-1.88	0.06	-0.218	0.449	-0.486	0.627
Shocks	HH experienced shocks (total shocks past 3 years)	0.275	0.338	0.812	0.417	-0.093	0.22	-0.424	0.671

² Following independent variables were not used due to very low number of observations: female headed households; religion; urban/rural status. Coping strategies were also not taken as independent variable because of low observations and also because we calculated total number of crimes/shocks rather than taking individual cases

	HH experienced crimes (total crimes past 3 years)	-0.289	0.433	-0.668	0.504	-0.621**	0.281	-2.209	0.027
Access to Basic Services	Satisfied with number of teachers	5.597***	0.743	7.53	0	2.265** *	0.529	4.282	0
	Satisfied with teacher attendance	-1.365*	0.758	-1.8	0.072	- 2.102** *	0.547	-3.84	0
	Satisfied with class size	0.383	0.692	0.554	0.58	-0.877*	0.524	-1.673	0.094
	Satisfied with School infrastructure	2.409***	0.718	3.357	0.001	0.194	0.503	0.386	0.7
	Paid informal fees to access service	-1.902***	0.863	-2.2	0.028	- .018***	0.001	-26.46	0
	Paid formal fees to access service	-2.538	3.798	-0.668	0.504	-3.765	2.609	-1.443	0.149
	Service is run by other than govt.	2.061	3.553	0.58	0.562	-0.001	0.001	-0.891	0.373
Governance	There has been community meeting (education)	0.755	1.074	0.703	0.482	-0.335	0.695	-0.482	0.63
	HH participated in community meeting	-0.222	2.857	-0.078	0.938	1.622	1.855	0.875	0.382
		R Squared ³ : 0.147*			N: 2114		R Square 0.59*		N: 2114

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 9: Responsibility for water source

Who is responsible for maintaining water source?	Frequency	Percentage
Government	270	12.77
NGO	22	1.04
Community	291	13.77
Charity	72	3.41
Organisation	39	1.84
Self	1,420	67.17

³ The R2 for boys' school is low (0.147) but in case of girls' primary school the R2 value is comparatively higher (0.59), which implies that the regression model for girls' school better explains the association of explanatory variables with outcome variables

Table 10: OLS regression of access to water source**Regression 5****Dependent variable: Access to drinking water (travel time in minutes to nearest water source)****Model: Multiple linear regression**

	Outcome Variables⁴	Coefficient	Std. Error	t-statistic	p-value
HH Factor	Constant	21.146***	2.181	9.695	0
	Respondent is female	0.298	0.362	0.825	0.409
	Average age of the HH members (years)	-0.004	0.027	-0.138	0.89
	Farming is main activity of the head of HH	-1.005	1.582	-0.636	0.525
	Farming is largest income source of HH	-0.03	0.536	-0.056	0.956
	Overseas labour is largest income source of HH	-0.614	0.669	-0.917	0.359
	Average education of the adult HH members	-.168***	0.064	-2.632	0.009
	At least one HH member is internal migrant	0.575	0.863	0.666	0.505
	At least one HH member is external migrant	-2.930***	1.073	-2.732	0.006
	HH receive remittance	3.126***	1.025	3.05	0.002
	HH displaced during conflict	-0.577	0.624	-0.924	0.356
	Dependency ratio	-0.022	0.254	-0.086	0.931
	Food insecurity index	-.122***	0.037	-3.257	0.001
	Morris index	0.007	0.007	1.081	0.28
	HH have own motor cycle	-0.765	0.705	-1.085	0.278
	HH have own car	0.393	0.625	0.629	0.53
Context	HH affected by conflict in past 3 years	0.725	0.667	1.087	0.277
	Feel safe while moving to workplace, market etc.	-.840*	0.497	-1.691	0.091
	district Swat	-2.796***	0.447	-6.249	0
Shocks	HH experienced shocks (total shocks past 3 years)	0.332	0.222	1.497	0.134
	HH experienced crimes (total crimes past 3 years)	.739**	0.285	2.594	0.01
Access to basic services	Have to queue for water	.008*	0.005	1.736	0.083
	Have to pay for drinking water	-0.003	0.004	-0.94	0.347
	Service is not run by govt.	-0.284	0.522	-0.545	0.586
Governance	There has been community meeting (water)	-0.798	0.704	-1.134	0.257
	HH participated in community meeting	-0.657	1.88	-0.349	0.727

R Square 0.06* Number of Observations: 2114

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 11: Correlation matrix of social protection, livelihood, food insecurity and Morris index

⁴ Following independent variables were not used due to very low number of observations: female headed households; religion; urban/rural status. Coping strategies were also not taken as independent variable because of low observations and also because we calculated total number of crimes/shocks rather than taking individual cases

	No of Livelihood assistance forms received	Food Security Index	Morris Score Index	No of social protection forms Received
No of Livelihood assistance forms received	1			
Food Security Index	-0.039	1		
Morris Score Index	0.235**	-0.166**	1	
No of social protection forms Received	0.142**	0.135**	-0.001	1

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 12: Logit regression of receipt of social protection

Regression 6			
Dependent variable: Access to Social Protection Services: Household receive BISP transfer ("no" as base)			
Model: Logit regression			
Outcome variables	Coefficient	S.E.	P-value
Constant	-0.613	0.426	0.151
Respondent is female	-0.097	0.122	0.43
Average age of the HH members (in years)	-.044***	0.01	0
Farming is the main activity of the head of HH	1.083**	0.439	0.014
Farming is largest income source of HH	-.387**	0.18	0.031
Overseas labour is largest income source of HH	-0.266	0.242	0.272
Average education of the adult HH members	-.165***	0.023	0
At least one HH member is internal migrant	0.068	0.303	0.823
At least one HH member is external migrant	-0.452	0.363	0.212
HH receives remittances	.573*	0.343	0.095
HH displaced during conflict	-0.12	0.21	0.568
Dependency ratio	0.131	0.081	0.106
Food insecurity index	-0.001	0.002	0.575
Morris index	.019*	0.011	0.093
HH affected by conflict in past 3 years	0.144	0.212	0.497
Perception of safety (feels safe in moving workplace, market etc.)	0	0	0.888
district Swat	1.233***	0.155	0
HH experienced shocks(total shocks past 3 years)	.165**	0.079	0.035
HH experienced crimes (total crimes past 3 years)	-0.081	0.092	0.381
There has been community meeting (social protection)	-0.272	1.215	0.823
HH participated in community meeting	-0.215	1.292	0.868

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 13: Logit regression of receipt of livelihood assistance

Regression 7				
Dependent Variable: Household receives any livelihood assistance (binary variable) "no" as base				
Model: Logit. regression				
HH Factors	Explanatory variables	Coefficient	S.E.	p-value
	Respondent is female	0.005	0.118	0.966
	Average age of HH members (in years)	0.005	0.009	0.558
	Farming is the main activity of the head of HH	1.158*	0.458	0.011
	Farming is largest income source of HH	.384*	0.15	0.01
	Overseas labour is largest income source of HH	-.526*	0.219	0.017
	Average education of the adult HH members	-0.008	0.021	0.708
	At least one HH member is internal migrant	-0.161	0.311	0.605
	At least one HH member is external migrant	0.231	0.353	0.512
	Rem HH receive remittances	-0.058	0.353	0.87
	HH displaced during conflict	-0.305	0.193	0.115
	Dependency ratio	-0.087	0.088	0.323
	Food insecurity index	.008***	0.002	0
	Morris index	-0.015	0.013	0.229
Context	HH effected by conflict in past 3 years	0.267	0.204	0.192
	Perception of safety (feels safe in moving workplace, market etc.)	0	0	0.795
	district Swat	1.851***	0.173	0
Shocks	HH experienced shocks(total shocks past 3 years)	0.012	0.08	0.878
	HH experienced crimes (total crimes past 3 years)	.224***	0.078	0.004
Governance	There has been community meeting (livelihood assistance)	-0.692	0.881	0.432
	HH participated in community meeting	1.02	0.943	0.28
Constant		-2.853***	0.427	0
R Square 0.241; Number of Observations 2087				

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 14: Satisfaction with aspects of health centre, by district

	Number of qualified personnel			Availability of medicine			Waiting time			Satisfied overall
District (***)	Not satisfied	Indifferent	Satisfied	Not satisfied	Indifferent	Satisfied	Not satisfied	Indifferent	Satisfied	
Lower Dir	94	160	590	273	229	342	273	236	335	514
	11.14	18.96	69.91	32.35	27.13	40.52	32.35	27.96	39.69	60.90
Swat	30	395	845	178	549	543	245	495	530	1105
	2.36	31.1	66.54	14.02	43.23	42.76	19.29	38.98	41.73	87.01
Total	124	555	1,435	451	778	885	518	731	865	1619
	5.87	26.25	67.88	21.33	36.8	41.86	24.5	34.58	40.92	76.58

Table 15: Multinomial logit regression of satisfaction with health service

Regression 8

Dependent variable: Overall satisfaction with health service (Dissatisfied as base)

Model: Multinomial logit regression

		Coefficient	Std. Error	P-value
Very dissatisfied	Intercept	2.201	2.09	0.29
	Respondent is female	0.726*	0.36	0.04
	Average age of the household members	0.002	0.03	0.93
	Farming is largest income source for H	-0.549	0.77	0.47
	Overseas labour is largest income source for HH	-0.800	0.52	0.13
	Education of respondent	-0.019	0.05	0.71
	HH receives remittances	0.033	0.46	0.94
	Displaced during conflict	0.210	0.73	0.78
	Dependence Ratio	-0.253	0.25	0.30
	Food insecurity index	-0.041	0.04	0.29
	Morris Index	0.015	0.01	0.07
	HH affected by conflict in Past 3 years	0.411	1.05	0.70
	Feel safe while moving outside (workplace, market)	-0.453	0.86	0.60
	dist. Swat	-2.22***	0.67	0.00
	HH experienced shocks (total no. of shocks(-0.169	0.19	0.38
	HH experienced crimes (total number of crimes)	0.070	0.33	0.83
	Satisfied with qualified person	-2.92***	0.35	0.00
	Satisfied with medicine	-1.347*	0.78	0.09
	Satisfied with waiting time	-0.904	0.65	0.16
	Paid official fees/formal cost of accessing service	-0.839	1.11	0.45
	Service is not run Govt.	-18.712	0.00	
Indifferent	Intercept	-3.527***	1.00	0.00
	Respondent is female	0.637***	0.21	0.00
	Average age of the household members	0.019	0.01	0.18
	Farming is largest income source for HH	-1.031***	0.37	0.01
	Overseas labour is largest income source for HH	-0.778	0.37	0.03
	Education Level of respondent	-0.006	0.03	0.83
	HH receives remittances	0.210	0.32	0.51
	Displaced during conflict	-0.584	0.37	0.12
	Dependency Ratio	-0.080	0.14	0.56
	Food insecurity index	0.022	0.02	0.29
	Morris Index	0.007	0.00	0.13
	HH affected by Conflict in Past 3 years	-0.029	0.44	0.95
	Feel safe while moving to workplace, market	0.166	0.35	0.63
	dist. Swat	0.920***	0.27	0.00
	Experience shocks (total no. of shocks)	0.260**	0.13	0.04
	Experienced (total number of crimes)	-0.365	0.24	0.13
	Satisfied with qualified person	0.645***	0.20	0.00
	Satisfied with medicine	0.681***	0.20	0.00
	Satisfied with waiting time	0.371**	0.17	0.03
	Paid official fees/formal cost of accessing service	0.159	0.46	0.73

	Service is not run by Govt.	-0.856	0.64	0.18
Satisfied	Intercept	-3.99***	0.81	0.00
	Respondent is female	-0.389**	0.18	0.03
	Average age of the household members	-0.007	0.01	0.56
	Farming is largest income source for HH	-0.400	0.25	0.11
	Overseas labour is largest income source for HH	-0.252	0.30	0.41
	Education of respondent	-0.019	0.02	0.43
	Receives remittances	0.345	0.27	0.20
	Displaced during conflict	-0.373	0.32	0.25
	Dependency Ratio	-0.156	0.11	0.16
	Food insecurity index	-0.006	0.02	0.75
	Morris Index	0.010	0.00	0.01
	HH affected by conflict in Past 3 years	0.093	0.33	0.78
	Feel safe in moving to workplace, market	0.331	0.25	0.19
	dist. Swat	1.954***	0.22	0.00
	Experienced shocks (total No. of shocks)	-0.122	0.12	0.30
	Experienced crimes (total No. of crimes)	0.170	0.14	0.22
	Satisfied with qualified person	0.746	0.17	0.00
	satisfied with medicine	2.383***	0.17	0.00
	Satisfied with waiting time	1.055***	0.14	0.00
	Paid official fees/formal cost of accessing service	-0.171	0.32	0.59
	Service is not run by Govt.	0.453	0.36	0.21
Very satisfied	Intercept	-14.56***	1.44	0.00
	Respondent is female	-0.132	0.25	0.59
	Average age of the household members	0.021	0.02	0.23
	Farming as largest income source for HH	-0.499	0.37	0.18
	Overseas labour as largest income source for HH	-0.631	0.40	0.11
	Education Level of respondent	-0.027	0.03	0.41
	Remittances received	0.854	0.37	0.02
	HH displaced during conflict	-0.126	0.44	0.78
	Dependency Ratio	0.003	0.17	0.99
	Food insecurity index	-0.003	0.03	0.90
	Morris Index	0.014***	0.00	0.00
	HH affected by Conflict in Past 3 years	0.466	0.49	0.34
	Feel safe in moving to workplace, market	0.707*	0.36	0.05
	dist. Swat	0.808**	0.32	0.01
	Experienced shocks (Total No. of shocks)	-0.113	0.16	0.47
	Experienced crimes (total No. of crimes)	0.643***	0.20	0.00
	Satisfied with qualified person	1.755***	0.41	0.00
	Satisfied with medicine	4.083***	0.38	0.00
	Satisfied with waiting time	2.050***	0.23	0.00
	Paid official fees/formal cost of accessing service	0.194	0.40	0.63
	Service is not run by Govt.	2.220***	0.41	0.00
R Square 0.653 No of Observations: 2062				

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 16: Satisfaction with aspects of education service

	Gender	Not satisfied	Indifferent	Satisfied
Number of teachers	Boys	36	489	818
	Girls	51	175	637
Quality of teaching staff	Boys	24	486	851
	Girls	54	175	637
Teacher attendance	Boys	44	571	745
	Girls	59	250	554
Class size	Boys	129	564	650
	Girls	123	245	488
Quality of school infrastructure	Boys	96	547	714
	Girls	128	218	517
Quality of equipment	Boys	111	618	632
	Girls	134	281	449

Table 17: Overall satisfaction with education services

Overall satisfaction with education	Boys		Girls	
	Frequency	%	Frequency	%
Very dissatisfied	18	2	30	3
Dissatisfied	150	13	166	18
Indifferent	57	5	46	5
Satisfied	661	59	542	59
Very satisfied	237	21	137	15
Total	1123	100	921	100

Table 18: Multinomial logit regression of satisfaction with education service

Regression 9

Dependent variable: Overall satisfaction from school services (Boys and girls) – dissatisfied as base

Model: Multinomial logit regression

	Outcome Variables ⁵	Boys School			Girls School		
		Coefficient	Std. Error	p-value	Coefficient	Std. Error	p-value
Very Dissatisfied	Intercept	-17.33***	2.51	0	17.58***	3.542	0
	Respondent is female	0.75	0.616	0.223	1.518***	0.585	0.009
	Average age of the HH members	0.063	0.062	0.305	-0.068	0.066	0.301
	Farming has largest share in HH income	1.5	1.094	0.171	-0.399	0.996	0.689
	Overseas labour is largest HH income source	0.992	1.065	0.352	1.045	1.019	0.305
	Education of respondent	0.004	0.086	0.966	-0.164	0.087	0.059
	HH received remittances	-0.463	1.075	0.667	-0.418	0.989	0.673
	HH displaced during conflict	16.149	0		1.623	1.329	0.222
	Dependency ratio	-0.148	0.406	0.715	-0.389	0.417	0.35
	Food insecurity index	-0.098	0.12	0.415	-0.128	0.104	0.217
	Morris index	-0.014	0.017	0.425	-0.014	0.012	0.253
	Feel safe while moving to workplace, market	-0.114	1.055	0.914	1.176	1.079	0.276
	district Swat	-0.413	1.222	0.736	0.325	0.785	0.679
	Experienced shocks (total no. of shocks)	0.071	0.328	0.829	.661*	0.339	0.051
	Experienced crimes (total no. of crimes)	0.727	0.452	0.108	0.036	0.424	0.932
	Satisfied with number of teachers	-1.544***	0.415	0	-4.60***	1.106	0
	Satisfied with teacher attendance	-0.303	0.415	0.464	-2.47***	0.675	0
	Satisfied with class size	0.087	0.585	0.882	-1.98***	0.661	0.003
	Satisfied with school infrastructure	-0.578	0.563	0.304	-2.98***	0.694	0
	Paid official fees for accessing service	0.565	1.225	0.645	-0.83	1.141	0.467
Indifferent	Intercept	-5.977***	1.656	0	17.92***	2.839	0
	Respondent is female	0.036	0.387	0.925	0.127	0.374	0.735
	Average age of the HH members	0.042	0.037	0.257	-0.033	0.037	0.373
	Farming has largest share in HH income	-0.534	0.689	0.438	-0.024	0.584	0.967
	Overseas labour is largest HH income source	1.382	0.798	0.083	-0.066	0.537	0.902
	Education of respondent	-0.042	0.053	0.429	-0.024	0.049	0.618

⁵ Coping strategies were also not taken as independent variable because of low observations and also because we calculated total number of crimes/shocks rather than taking individual cases.

	HH received remittance	-1.533*	0.79	0.052	0.328	0.517	0.526
	HH displaced during conflict	-0.494	0.662	0.456	0.538	0.666	0.42
	Dependency ratio	0.282	0.203	0.166	0.02	0.246	0.934
	Food insecurity index	0.003	0.047	0.956	-0.029	0.035	0.399
	Morris index	-0.005	0.008	0.549	-0.009	0.006	0.131
	Feel safe while moving to workplace, market	1.587**	0.762	0.037	0.01	0.577	0.986
	district Swat	1.514***	0.576	0.009	0.194	0.439	0.658
	Experienced shocks (total no. of shocks)	-0.161	0.226	0.475	.595***	0.207	0.004
	Experienced crimes (total no. of crimes)	-0.52	0.572	0.363	-.968***	0.314	0.002
	Satisfied with number of teachers	0.592	0.379	0.118	-3.316	1.059	0.002
	Satisfied with teacher attendance	0.193	0.32	0.547	-1.95***	0.594	0.001
	Satisfied with class size	.776***	0.291	0.008	-1.91***	0.456	0
	Satisfied with school infrastructure	.795***	0.303	0.009	-3.18***	0.559	0
	Paid official fees for accessing service	0.082	0.632	0.896	0	0.005	0.966
Satisfied	Intercept	-3.425***	1.118	0.002	17.122	3.09	0
	Respondent is female	-.794***	0.273	0.004	0.246	0.46	0.594
	Average age of the HH members	-0.006	0.027	0.812	-0.068	0.049	0.167
	Farming has largest share in HH income	-0.297	0.442	0.501	-0.221	0.778	0.777
	Overseas labour is largest HH income source	-0.467	0.406	0.249	1.482	0.867	0.087
	Education of respondent	-0.034	0.036	0.35	-.077*	0.061	0.201
	HH received remittances	0.281	0.382	0.462	-1.467	0.858	0.087
	HH displaced during conflict	-0.597	0.454	0.188	0.463	0.873	0.596
	Dependency ratio	-0.123	0.166	0.459	-0.297	0.32	0.354
	Food insecurity index	0.038	0.032	0.237	-0.075	0.049	0.128
	Morris index	0.007	0.005	0.169	-.018*	0.01	0.077
	Feel safe while moving to workplace, market	0.493	0.438	0.26	0.375	0.758	0.621
	district Swat	1.948***	0.422	0	1.02	0.523	0.051
	Experienced shocks (total no. of shocks)	-.438***	0.147	0.003	0.025	0.298	0.934
	Experienced crimes (total no. of crimes)	0.157	0.229	0.492	-1.007**	0.434	0.02
	Satisfied with number of teachers	0.447	0.236	0.058	-3.59***	1.082	0.001
	Satisfied with teacher attendance	.922***	0.228	0	-1.86***	0.647	0.004
	Satisfied with class size	1.110***	0.191	0	-1.38***	0.525	0.009
	Satisfied with school infrastructure	1.235	0.2	0	-2.193***	0.608	0
	Paid official fees for accessing service	0.39	0.431	0.366	-0.008	0.034	0.806

Very satisfied	Intercept	-18.00***	2.126	0	15.20***	2.619	0
	Respondent is female	-0.037	0.325	0.908	0.095	0.251	0.704
	Average age of the HH members	0.027	0.033	0.41	-0.011	0.025	0.665
	Farming has largest share in HH income	-0.575	0.522	0.271	0.313	0.393	0.426
	Overseas labour is largest HH income source	-0.618	0.501	0.217	-0.111	0.383	0.773
	Education of respondent	-0.02	0.044	0.643	-0.036	0.033	0.271
	HH received remittances	0.236	0.468	0.613	0.005	0.376	0.989
	HH displaced during conflict	-0.565	0.556	0.31	-0.174	0.404	0.666
	Dependency ratio	-0.138	0.216	0.523	-0.121	0.171	0.479
	Food insecurity index	.076**	0.038	0.045	-0.022	0.022	0.335
	Morris index	0.004	0.006	0.516	-0.004	0.004	0.256
	Feel safe while moving to workplace, market	1.309**	0.509	0.01	-.686**	0.345	0.047
	district Swat	.793*	0.483	0.101	1.43***	0.3	0
	Experienced shocks (total no. of shocks)	-0.436	0.179	0.015	0.03	0.149	0.839
	Experienced crimes (total no. of crimes)	0.424	0.281	0.132	-.481***	0.184	0.009
	Satisfied with number of teachers	2.390***	0.646	0	-2.92***	1.04	0.005
	Satisfied with teacher attendance	2.709***	0.535	0	-1.220**	0.557	0.029
	Satisfied with class size	2.413***	0.367	0	-1.23***	0.419	0.003
	Satisfied with school infrastructure	2.630***	0.422	0	-1.43***	0.533	0.007
	Paid official fees for accessing service	1.620***	0.476	0.001	-.860***	0.235	0
		R Square 0.55		Observation 1028	R Square 0.59 Observation 828		

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 19: Logit regression of satisfaction with water quality

Regression 10			
Dependent Variable: Is water clean and safe? (No as base)			
Model: Logit regression			
Explanatory variables⁶	Coefficient	S.E.	Sp-value.
Constant	4.048***	1.263	0.001
Respondent is female	-0.034	0.193	0.861
Average age of the household members	0.025	0.016	0.113
Farming is the main activity of HH head	0.143	0.765	0.851
Farming has largest income share for HH	-0.19	0.256	0.457
Overseas labour has largest income share for HH	-0.221	0.371	0.552
Avg. education of adult household members	-0.03	0.026	0.252
At least on HH member is internal migrant	0.12	0.528	0.82
At least one HH member is external migrant	0.428	0.616	0.488
HH received remittances	-0.38	0.602	0.528
HH was displaced during conflict	0.275	0.311	0.376
Food insecurity index	0.001	0.134	0.996
Morris index	-0.004	0.019	0.822
HH affected by conflicts in past 3 years	-.004*	0.003	0.094
Feel safe while moving to workplace, market	.359*	0.218	0.099
dist. Swat	-.945***	0.271	0
HH experienced shocks (total no. of shocks)	-0.071	0.122	0.558
No. of crimes experienced by the HH	-0.159	0.12	0.184
Have to queue for water	-.852***	0.207	0
Have to pay for water	0.003	0.013	0.813
There was community meeting for water	-1.135	1.042	0.276
HH participated in local decision making processes	-0.001	0.001	0.346
R Square 0.036 Observations 2087			

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 20: Multinomial logit regression of impact of social protection transfer (for BISP)

Regression 11

Dependent Variable: Impact of the transfer on the household (Base: "The transfer is too small to make difference to my life")

Model: Multinomial logit. regression

The transfer helps me a bit: I can buy some extra food	Variable Name	Coefficient	Std. Error	p-value
	Intercept	888.527	1499.744	0.554
	Respondent is female	.563*	0.286	0.049
	Average age of the household members	0.017	0.025	0.501
	Farming is Main activity of the head of HH	0.269	0.398	0.499
	Farming has largest share in HH income	-0.548	0.822	0.505
	Overseas labour as largest income source for HH	-0.657	0.588	0.264
	Education of respondent	-.110***	0.04	0.005
	At least one HH member is internal migrant	-0.183	0.719	0.799
	At least one HH member is external migrant	0.578	0.901	0.521
	HH receive remittances	-0.437	0.794	0.582
	HH displaced during conflict	-.899*	0.537	0.094
	Dependency Ratio	0.251	0.18	0.162
	Food insecurity index	.095***	0.028	0.001
	Morris index	-0.006	0.005	0.185
	HH affected by conflict in past 3 years	-0.241	0.473	0.61
	Feel safe in moving to workplace, market district Swat)	0.239	0.353	0.499
		-1.795***	0.456	0
	HH experienced shocks (total no. of shocks)	0.132	0.185	0.476
	HH experienced crimes (total number of crimes)	.696***	0.243	0.004
	Received right amount of cash	0.608	0.536	0.257
	Received transfer on time	1.570***	0.523	0.003
	There has been community meeting on social protection	-1	1.689	0.554
	HH participated in local decision-making processes	-887.073	1498.348	0.554
The transfer helps me quite a lot: we are rarely of food anymore and I can buy some other household items	Intercept	2718.574	6457.273	0.674
	Respondent is female	0.452	0.579	0.435
	Average age of the household members	0.05	0.043	0.238
	Farming is Main activity of the head of HH	-0.632	1.158	0.585
	Farming has largest share in HH income	-1.267	3.637	0.728
	Overseas labour as largest	2.624	4.907	0.593

	income source for HH			
	Education of respondent	-.196**	0.08	0.014
	At least one HH member is internal migrant	0.392	1.31	0.765
	At least one HH member is external migrant	-0.249	5.306	0.963
	HH receive remittances	-2.963	2.501	0.236
	HH displaced during conflict	-0.482	1.269	0.704
	Dependency Ratio	0.305	0.31	0.324
	Food insecurity index	0.019	0.06	0.755
	Morris index	-0.02	0.016	0.202
	HH affected by conflict in past 3 years	0.548	1.199	0.648
	Feel safe in moving to workplace, market	-0.751	0.648	0.247
	District Swat	-1.363	0.926	0.141
	HH experienced shocks (total no. of shocks)	-0.174	0.462	0.707
	HH experienced crimes (total number of crimes)	0.527	0.435	0.225
	Received right amount of cash	0.406	1.21	0.737
	Received transfer on time	1.243	1.204	0.302
	There has been community meeting on social protection	-3.063	7.272	0.674
	HH participated in local decision-making processes	-2718.366	6452.241	0.674
The transfer helps me a lot: we are never short of food anymore and I can pay for school or invest in a small business	Intercept	- 5833.8***	3.999	0
	Respondent is female	0.538	0.442	0.224
	Average age of the household members	0.012	0.04	0.764
	Farming is Main activity of the head of HH	0.357	0.784	0.649
	Farming has largest share in HH income	0.348	1.466	0.812
	Overseas labour as largest income source for HH	1.6	1.611	0.321
	Education of respondent	-.167***	0.061	0.006
	At least one HH member is internal migrant	-3.062	2.135	0.152
	At least one HH member is external migrant	-1.382	2.684	0.607
	HH receive remittances	0.107	2.243	0.962
	HH displaced during conflict	-1.872***	0.679	0.006
	Dependency Ratio	0.192	0.28	0.494
	Food insecurity index	0.058	0.041	0.153
	Morris index	-.033**	0.013	0.01
	HH affected by conflict in past 3 years	-0.276	0.74	0.71
	Feel safe in moving to workplace, market	0.363	0.614	0.554

District Swat	-2.888***	0.639	0
HH experienced shocks (total no. of shocks)	-0.009	0.295	0.976
HH experienced crimes (total number of crimes)	0.613	0.394	0.12
Received right amount of cash	0.112	0.773	0.885
Received transfer on time	-0.282	0.681	0.679
There has been community meeting on social protection	6.574***	0.004	0
HH participated in local decision-making processes	5828.643	0	

R Square 0.132 Number of Observation 400

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 21: Logit regression of impact of livelihoods assistance

Regression 12

Dependent variable: Improvement in agriculture production from livelihood assistance

Model: Binary logit regression

Explanatory Variables	Due to Seed/tools			Due to fertilizer/pesticides		
	Coefficient	S.E.	p-value	Coefficient	S.E.	p-value
Average Age	0.02	0.027	0.449	-0.027	0.034	0.426
Education of respondent	0.032	0.048	0.513	-0.008	0.054	0.889
Number of income sources	0.04	0.224	0.857	0.224	0.267	0.401
Ratio of number of self employed	-1.839	1.821	0.313	-1.591	2.134	0.456
Ratio of number of employed	0.624	1.491	0.676	-0.333	1.879	0.859
HH has at least one external migrant	-0.026	0.413	0.95	-0.227	0.477	0.634
HH displaced during conflict	-0.683	0.578	0.238	-0.537	0.682	0.431
HH experienced shocks (total No. of shocks)	-.411*	0.247	0.096	-.519*	0.282	0.066
had problems in Agriculture	0.206	0.608	0.734	0.108	0.659	0.87
HH experienced crimes (total No. of crimes)	-0.085	0.203	0.674	-0.322	0.294	0.274
Food Insecurity Index	0.031	0.039	0.419	-0.068	0.059	0.248
Morris Index	-0.002	0.004	0.656	0.001	0.005	0.861
HH received social protection	0.544	0.399	0.173	-0.519	0.443	0.241
HH possesses cultivable land	1.158	0.424	0.006	0.642	0.481	0.182
HH owe any money/ Credit	-0.201	0.402	0.617	0.036	0.435	0.933
HH received seeds/tool from non-govt.	3.33***	0.214	0	.543***	0.209	0.009
HH received fertilizer/pesticide from non-govt.	0.119	0.197	0.544	3.161***	0.227	0
Constant	-5.952***	1.146	0	-4.280***	1.318	0.001
	R Square 0.41 Observations: 2108			R Square 0.30 Observations: 2108		

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 22: Logit regression of perception of whether local government cares about opinions

Regression 13		
Dependent: Local government cares about my opinions (base: no_		
Model: Logit regression		
Variables	Coefficient	Std. Err
Respondent is female	0.232	(0.220)
Respondent age	-0.00372	(0.00707)
Farming is main activity of HH head	0.186	(0.328)
Casual labour is main activity of HH head	1.030***	(0.367)
Casual labour (non-agriculture) is main activity of HH head	0.795**	(0.385)
Own business is main activity of HH head	-0.518	(0.493)
No paid activity is main activity of HH head	-1.209***	(0.343)
HH head has some education	-0.420**	(0.214)
Household has a migrant	0.146	(0.447)
Hh receives remittances	-0.0769	(0.440)
Dependency ratio	-0.346**	(0.173)
Morris Score Index	0.00455	(0.00320)
Food insecurity index	-0.0364	(0.0279)
Ever displaced	-0.0304	(0.366)
Perception of safety (moving outside)	1.198***	(0.368)
Lower Dir	0.842**	(0.336)
Total shocks	0.193	(0.138)
Total crimes	-0.0944	(0.195)
Distance to health centre	-0.000681	(0.00381)
Receives any social protection	0.183	(0.241)
Receives any livelihood assistance	-0.0676	(0.265)
Satisfied with quality of health centre	-0.0637	(0.368)
Water is clean and safe	0.637	(0.490)
Number of qualified personnel at health centre: Neutral	-0.483	(0.614)
Number of qualified personnel at health centre: Satisfied	1.014*	(0.560)
Availability of medicines at health centre: Neutral	-0.240	(0.343)
Availability of medicines at health centre: Satisfied	-0.359	(0.379)
Waiting time at health centre: Neutral	-0.126	(0.342)
Waiting time at health centre: Satisfied	-0.261	(0.329)
Have to queue for water	-1.423***	(0.391)
Official fees at health centre	-0.406	(0.397)
Health service not run by government	-0.419	(0.401)
Water not run by government	0.618*	(0.367)
Number of problems encountered with services	-0.0432	(0.103)
Knows of official way to report problem	1.240***	(0.311)
Know of community meeting (aggregate)	-0.716	(0.829)
Number of community meetings participated in	0.969	(0.836)
Has been consulted on services	0.809***	(0.305)
Constant	-4.947***	(1.173)
Observations	2,064	
Pseudo R-squared	0.21	

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 23: Logit regression of perception of whether central government cares about opinions

Regression 14		
Dependent: Central government cares about my opinions (base: no)		
Model: Logit regression		
Variables	Coefficient	Std. Err
Respondent is female	-0.202	(0.269)
Respondent age	-0.00733	(0.00837)
Farming is main activity of HH head	-0.106	(0.347)
Casual labour is main activity of HH head	-0.0859	(0.451)
Casual labour (non-agriculture) is main activity of HH head	-0.0194	(0.467)
Own business is main activity of HH head	-0.624	(0.496)
No paid activity is main activity of HH head	-1.306***	(0.371)
HH head has some education	-0.0936	(0.244)
Household has a migrant	-0.207	(0.533)
HH receives remittances	-0.176	(0.522)
Dependency ratio	-0.317	(0.196)
Morris Score Index	0.00404	(0.00342)
Food insecurity index	-0.0942**	(0.0429)
Ever displaced	0.881	(0.625)
Perception of safety (moving outside)	0.224	(0.347)
Location: Swat (reference: Lower Dir)	0.657*	(0.396)
Total shocks	0.197	(0.155)
Total crimes	0.138	(0.181)
Distance to health centre	-0.00313	(0.00465)
Receives any social protection	0.491*	(0.270)
Receives any livelihood assistance	-0.441	(0.318)
Satisfied with quality of health centre	-0.711*	(0.368)
Water is clean and safe	0.193	(0.462)
Number of qualified personnel at health centre: Neutral	0.410	(0.718)
Number of qualified personnel at health centre: Satisfied	1.419**	(0.691)
Availability of medicines at health centre: Neutral	-0.369	(0.378)
Availability of medicines at health centre: Satisfied	-0.852**	(0.432)
Waiting time at health centre: Neutral	0.642	(0.428)
Waiting time at health centre: Satisfied	0.647	(0.433)
Have to queue for water	-0.747*	(0.391)
Official fees at health centre	-0.264	(0.464)
Health service not run by government	-0.446	(0.472)
Water not run by government	0.382	(0.395)
Number of problems encountered with services	0.0650	(0.106)
Knows of official way to report problem	1.128***	(0.327)
Knows of community meeting (aggregate)	-0.130	(0.678)
Number of community meetings participated in	0.401	(0.687)
Has been consulted on services	0.740**	(0.301)
Constant	-4.562***	-1.398
Observations	2,064	
Pseudo R-squared	0.18	

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 24: Multinomial logit regression of perception of whether local government decisions reflect priorities

Regression 15					
Dependent: Local government decisions reflect household's priorities					
Model: Multinomial logit regression					
	Never or almost never	Only in some areas		Largely or completely	
Variables		Coefficient	Std. Err.	Coefficient	Std. Err.
Respondent is female	(base)	-0.190	(0.276)	0.428	(0.332)
Respondent age		-0.0229**	(0.00915)	0.00673	(0.0106)
Farming is main activity of HH head		1.121**	(0.519)	-0.318	(0.470)
Casual labour is main activity of HH head		1.674***	(0.561)	0.470	(0.578)
Casual labour (non-agriculture) is main activity of HH head		1.690***	(0.555)	0.241	(0.586)
Own business is main activity of HH head		0.885	(0.583)	-0.537	(0.692)
No paid activity is main activity of HH head		0.146	(0.488)	-1.324***	(0.501)
HH head has some education		-0.366	(0.256)	-0.267	(0.325)
Household has a migrant		-0.277	(0.558)	-0.228	(0.658)
HH receives remittances		0.430	(0.545)	-0.242	(0.643)
Dependency ratio		-0.279	(0.197)	-0.116	(0.236)
Morris Score Index		-0.00331	(0.00476)	0.00810*	(0.00419)
Food insecurity index		-0.0611*	(0.0335)	-0.0107	(0.0373)
Ever displaced		-0.123	(0.418)	-0.401	(0.523)
Perception of safety (moving outside)		0.148	(0.360)	1.629**	(0.669)
Location: Swat (reference: Lower Dir)		1.463***	(0.422)	-0.0825	(0.504)
Total shocks		-0.0888	(0.192)	0.446**	(0.191)
Total crimes		-0.125	(0.225)	-0.0636	(0.306)
Distance to health centre		-0.0123**	(0.00623)	-0.00414	(0.00629)
Receives any social protection		0.214	(0.290)	0.239	(0.374)
Receives any livelihood assistance		-0.291	(0.327)	0.624	(0.404)
Satisfied with quality of health centre		-0.997**	(0.434)	-0.581	(0.512)
Water is clean and safe		0.356	(0.554)	0.588	(0.762)
Number of qualified personnel at health centre: Neutral		-2.154***	(0.683)	0.0588	(0.811)
Number of qualified personnel at health centre: Satisfied		-0.525	(0.527)	0.802	(0.756)
Availability of medicines at health centre: Neutral		0.261	(0.482)	-0.495	(0.525)
Availability of medicines at health centre: Satisfied		0.957*	(0.510)	-0.646	(0.562)
Waiting time at health centre: Neutral		-0.475	(0.418)	-0.188	(0.543)
Waiting time at health centre: Satisfied		-0.489	(0.357)	0.127	(0.522)
Have to queue for water		-0.994**	(0.435)	-0.852	(0.540)
Number of problems encountered with services		-0.109	(0.139)	-0.371**	(0.164)
Knows of official way to report problem		0.951**	(0.391)	1.181**	(0.466)
Knows of community meeting (aggregate)		-0.00280	(0.533)	-0.636	(1.358)
Number of community meetings participated in		0.273	(0.555)	1.134	(1.363)
Has been consulted on services		-11.42	(373.1)	0.514	(0.401)
Constant		-2.010*	(1.165)	-5.362***	(1.512)
Observations	2,088	2,088		2,088	
Pseudo R-squared	0.20	0.20		0.20	

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 25: Multinomial logit regression of perception of whether local government decisions reflect priorities

Regression 16					
Dependent: Central government decisions reflect household's priorities					
Model: Multinomial logit regression					
	Never or almost never	Only in some areas		Largely or completely	
Variables		Coefficient	Std. Err.	Coefficient	Std. Err.
Respondent is female	(base)	-0.0185	(0.342)	0.330	(0.448)
Respondent age		-0.00699	(0.0114)	0.0121	(0.0140)
Farming is main activity of HH head		-0.618	(0.507)	-0.643	(0.610)
Casual labour is main activity of HH head		-1.019	(0.784)	-14.84	(882.9)
Casual labour (non-agriculture) is main activity of HH head		0.160	(0.545)	-0.209	(0.844)
Own business is main activity of HH head		0.132	(0.499)	-1.045	(0.882)
No paid activity is main activity of HH head		-1.374***	(0.474)	-0.952	(0.581)
HH head has some education		-0.0712	(0.319)	-0.801*	(0.456)
Household has a migrant		-1.067*	(0.601)	-0.877	(0.845)
Household receives remittances		0.995*	(0.572)	0.275	(0.821)
Dependency ratio		0.0521	(0.218)	-0.318	(0.342)
Morris Score Index		0.00157	(0.00473)	0.0200**	(0.00634)
Food security index		-0.105**	(0.0531)	-0.00357	(0.0528)
Ever displaced		0.586	(0.746)	14.12	(1,083)
Perception of safety (moving outside)		0.233	(0.452)	15.93	(505.0)
Location: Swat (reference: Lower Dir)		0.347	(0.479)	-1.088*	(0.655)
Total shocks		0.0923	(0.211)	0.409*	(0.235)
Total crimes		-0.0136	(0.249)	0.122	(0.402)
Distance to health centre		-0.00952	(0.00723)	-0.00499	(0.00812)
Receives any social protection		0.0579	(0.375)	-0.284	(0.595)
Receives any livelihood assistance		-0.305	(0.422)	-0.368	(0.689)
Number of problems encountered with services		-0.165	(0.145)	-0.265	(0.179)
Knows of official way to report problem		0.0267	(0.560)	1.896***	(0.525)
Knows of community meeting (aggregate)		-0.205	(0.831)	-17.07	(853.0)
Number of community meetings participated in		0.393	(0.848)	17.64	(853.0)
Has been consulted on services		0.747	(0.537)	1.020*	(0.616)
Constant		-3.494***	(1.206)	-34.12	(1,195)
Observations	2,088	2,088		2,088	
Pseudo R-squared	0.18	0.18		0.18	

Note: Asterisks indicate significance: * p<0.1 ** p<0.05 *** p<0.01

Table 26: District-wise distribution of castes (%)

Caste	Name of District		Total
	Lower Dir	Swat	
ABA KHAIL	23	4	27
ATMA KHAIL	55	15	70
BACHA KHEL	40	0	40
BAHADUR KHEL	0	25	25
BAWAR KHAN	68	5	73
ESSA KHAIL	43	0	43
KAKA KHEL	10	16	26
KHADAR KHAIL	9	21	30
MALA KHAIL	6	19	25
MALYAAN	8	21	29
MAYAAR KHAIL	74	88	162
MOLA KHEL	4	90	94
PAKHTOON	3	53	56
PARACHA	0	63	63
PATA KHAN KALA	11	43	54
SADAAT	23	0	23
SAHIB ZADA	59	4	63
SLEH KHEL	3	55	58
SULTAN KHAIL	8	21	29
SWAH	43	63	106
SYDAH	8	40	48
TARAAN	44	11	55
UMAR KHAIL	0	31	31
ZAINI KHAIL	20	8	28
Other	257	555	812
Total	819	1251	2070

Table 27: To whom the household made a complaint, by service

	Health		Education		Water		Social Protection		Livelihood Service	
	N	%	N	%	N	%	N	%	N	%
Local government	37	57.8	45	88.2	123	67.6	31	73.8	38	1.9
Members of the community	9	14.1	2	3.9	32	17.6	4	9.5	3	0.1
International agencies	1	1.6	1	2.0	7	3.8	3	7.1	2	0.1
Local NGO	1	1.6	1	2.0	7	3.8	2	4.8	6	0.3
Masque/Jirga	4	6.3	2	3.9	2	1.1	2	4.8	2	0.1
Influential/elders	12	18.8	0	0	11	6.0	0	0	1970	97.5
Total	64	100	51	100	182	100	42	100	2021	100

Table 28: Experience of food insecurity, by food group (%)

	Grains	Root/tuber	Pulses	Vegetables	Fruits	Meat/fish	Eggs	Dairy products	Oil/ghee
Never	0.2	0.0	0.8	0.3	14.3	15.2	6.7	4.5	0.1
Rarely	0.1	12.6	19.4	10.5	44.0	33.0	25.7	2.9	0.4
Sometimes	0.1	56.0	47.8	38.6	28.3	30.6	41.5	8.8	0
Often	1.8	28.8	31.5	43.5	10.1	15.0	20.1	9.3	0.3
Always	97.8	2.6	0.5	7.1	3.3	6.3	6.2	74.5	99.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: (Rarely=once or twice in a month; Sometimes= 3-10 times in a month; Often=more than 10 times in a month)



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