Tracking livelihoods, service delivery and governance

Panel survey findings from the Secure Livelihoods Research Consortium

June 2017



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Cover photo: the parched landscape of Matheniko County seen from the air. The villages are circular structures made up of huts ringed by brushwood fences. © Mikkel Ostergaard

Preface



The Secure Livelihoods Research Consortium (SLRC) aims to generate a stronger evidence base on statebuilding, service delivery and livelihood recovery in fragile and conflict-affected situations. It began in 2011 with funding from the UK's Department for International Development, Irish Aid and the European Commission.

At the centre of SLRC's research are three core questions, developed over the course of an intensive one-year inception period in which the consortium set about identifying major evidence gaps:

- To what extent and under what conditions does the delivery of basic services and social protection contribute towards state legitimacy in fragile and conflict-affected situations?
- How do external actors attempt to develop the capacities of states in fragile and conflict-affected situations to deliver better services – and how fit for purpose are the dominant approaches?
- What do livelihood trajectories in fragile and conflictaffected situations tell us about how governments and aid agencies can more effectively support the ways in which people make a living?

From 2011 to 2016 – the duration of SLRC's first phase – the consortium implemented packages of quantitative and qualitative research across eight countries affected by fragility and conflict to varying degrees: Afghanistan, Democratic Republic of the Congo, Nepal, Pakistan, Sierra Leone, South Sudan, Sri Lanka and Uganda.

This paper is one of a series of 'synthesis reports' produced at the end of SLRC's first phase. These reports bring together and analyse all relevant material on SLRC's overarching research questions, with a view to drawing out broader lessons that will be of use to policy makers, practitioners and researchers. There are five in total:

- Service delivery, public perceptions and state legitimacy. A synthesis of SLRC's material on the first overarching research question above.
- Service delivery and state capacity. A synthesis of SLRC's material on its second overarching research question.
- Livelihoods, conflict and recovery. A synthesis of SLRC's material on its third overarching research question.
- Markets, conflict and recovery. A more focused synthesis of the role that markets and the private sector play in processes of livelihood recovery. It links to and informs the 'Livelihoods, conflict and recovery' report.
- Tracking livelihoods, service delivery and governance. A synthesis of SLRC' cross-country survey findings, drawing on two rounds of data collection with the same respondents.

Although specific authors were responsible for the analysis and writing of each synthesis report, all must ultimately be considered products of a collective, consortium-wide effort. They simply would not have been possible without the efforts and outputs of SLRC's various partner organisations. They include the Overseas Development Institute (ODI) in the UK, the Centre for Poverty Analysis (CEPA) in Sri Lanka, Feinstein International Center (FIC) at Tufts University in the USA, the Afghanistan Research and Evaluation Unit (AREU), the Sustainable Development Policy Institute (SDPI) in Pakistan, Disaster Studies at Wageningen University (WUR) in the Netherlands, the Nepal Centre for Contemporary Research (NCCR), Focus 1000 in Sierra Leone, and the Food and Agriculture Organization (FAO).

Acknowledgements



As a synthesis of five country studies, this report is the result of a collective exercise. We therefore thank each SLRC country survey team – as well as all enumerators and fieldwork supervisors – for their hard work in implementing the project, creating the datasets and undertaking analysis. We are grateful to Marco D'Errico (FAO), Stefania Di Giuseppe (FAO) and Robert Blair (Brown University) for valuable technical guidance throughout the process and thank Sonia Sezille, Fiona Lamont and Patricia Prohaszka for internal administrative support. For their constructive and insightful feedback on earlier versions of this report, we thank Derick Brinkerhoff (RTI International), Ed Carr (Clark University), Adriaan Ferf (SLRC/independent consultant), Paul Harvey (SLRC/ Humanitarian Outcomes), Dyan Mazurana (SLRC/Tufts University), Ben Oppenheim (Center on International Cooperation) and Mareike Schomerus (SLRC/ODI). Charlotte Morris, Marcus Lenzen and Rurik Marsden (UK Department for International Development, DFID) acted as especially useful sounding boards during the analysis phase. We are also grateful to Steve Commins (University of California) for contributing to the executive summary.

Finally, we thank Jo Fottrell for editing, Garth Stewart for layout, Emily Steadman for proofreading, Claire Bracegirdle for managing the production, and the whole SLRC team at ODI (past and present) for their support since 2011.

Acronyms and glossary



AREU	Afghanistan Research and Evaluation Unit	MSI	Morris Score Index
ANP	Awami National Party, Pakistan	NCCR	Nepal Centre for Contemporary Research
CAS	Conflict-affected situations	NGO	Non-governmental organisation
CEPA	Centre for Poverty Analysis, Sri Lanka	OCHA	United Nations Office for the Coordination
CSI	Coping Strategies Index		of Humanitarian Affairs
DRC	Democratic Republic of the Congo	ODI	Overseas Development Institute
FAO	Food and Agriculture Organization	OECD	Organisation for Economic Cooperation
FCS	Food Consumption Score		and Development
FDLR	Democratic Forces for the Liberation of	PML-N	Pakistan Muslim League
	Rwanda	PPP	Pakistan People's Party
FE	Fixed effects (regression)	PRDP	Peace, Recovery and Development,
FEWS Net	Famine Early Warning Systems Network		Uganda
FHH	Female-headed households	PSU	Primary sampling unit
FIC	Feinstein International Center, United	PTI	Pakistan Tehrik-e-Insaf
	States	RE	Random effects (regression)
GDP	Gross domestic product	SDGs	Sustainable Development Goals
IDP	Internally displaced person	SDPI	Sustainable Development Policy Institute,
INGO	International non-governmental		Pakistan
	organisation	SLRC	Sustainable Livelihoods Research
II	Jamaat-e-Islami, Pakistan		Consortium
KP	Khyber Pakhtunkhwa, Pakistan	TTP	Tehrik-e-Taliban Pakistan
LGCDP	Local Governance and Community	UCPN-M	United Communist Party of Nepal (Maoist)
	Development Programme, Nepal	UN	United Nations
LRA	Lord's Resistance Army, Uganda	WUR	Disaster Studies of Wageningen
MHH	Male-headed household		University, the Netherlands

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Executive Summary



Background

An estimated two billion people live in countries affected by fragility, conflict and large-scale violence (World Bank, 2016). In settings like these, public-goods provision, equitable growth and rights-based development are at their most challenging, which is why donor governments maintain a particular focus on such areas. The UK Department for International Development (DFID), for example, has recently reaffirmed its commitment to spend at least 50% of its budget in conflict-affected situations every year until 2020. At a time when aid spending is under increasing public pressure domestically, it is essential that such investments are based on rigorous empirical evidence. Yet current understanding of how processes of post-conflict recovery and state-building play out remains patchy, meaning blueprint approaches to programming continue to dominate (Hilhorst et al., 2017).

This is where the Secure Livelihoods Research Consortium (SLRC) comes in. As a multi-year, crosscountry research programme, one of the SLRC's overarching aims is to help better understand the processes of livelihood recovery and state-building during and following periods of conflict, To this end, the SLRC has, as a key component of its work, established longitudinal panels with individuals as the unit of analysis in five countries: Democratic Republic of the Congo (DRC), Nepal, Pakistan, Sri Lanka and Uganda.

This report summarises the main findings of the SLRC longitudinal panel survey, which tracked individuals across the five countries in 2012 (2013 in Uganda) and again in 2015. From a baseline of 9,767 respondents, we re-interviewed 8,404 (86%) of these same individuals in wave 2 (Table 1), collecting longitudinal data on three areas of interest:

 People's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context);

- Their access to/experiences with basic services (education, health, water) and transfers (social protection, livelihood assistance)
- Their relationships with governance processes and practices (civic participation, perceptions of major political actors).

Following a baseline report on the 2012 data (Mallett *et al.*, 2015), this report synthesises the findings across the two waves of the panel survey.

wave		pondents p		anu panei
	Wave 1	Wave 2	Found (%)	Attrition (%)
DRC	1,243	1,040	84	16

Total	9,767	8,404	86	14
Uganda	1,857	1,554	84	16
Sri Lanka	1,377	1,183	86	14
Pakistan	2,114	1,772	84	16
Nepal	3,176	2,855	90	10
DRC	1,243	1,040	84	16

From sources other than our survey, we know that some of our study sites underwent substantial transformations in the period between our first and second waves of data collection. South Kivu in eastern DRC continues to be characterised by limited frontline provision of services by the government and continuing conflict between various militant groups. In contrast, in our sites in Pakistan (Swat and Lower Dir districts in KP region), there has been a substantial reduction in fighting between groups and local level government has been restored following elections. In Nepal, our survey sites in Rolpa, Bardiya and llam districts did not bear the brunt of the 2015 earthquake but all were affected to some extent by the demonstrations, strikes and blockades that accompanied the promulgation of a new constitution in Nepal in 2015. In Sri Lanka, we saw uneven post-war reconstruction and development in the three survey sites - Mannar, Jaffna and Trincolamee districts - and the presidential elections brought a swell of positive opinion towards central government. In Uganda, our survey sites Acholiland and

Lango – sub-regions which were among those worst affected by the conflict – continue to rely heavily on agriculture, but two good harvests immediately before our second wave appear to have improved food security.

Key findings

Rises and falls in livelihoods and wellbeing can be rapid, reflecting the exposure of households to shocks and a lack of sustained external support.

More than 90% of households experienced some change in food security between survey waves. By 2015, a slim majority of households had experienced an improvement in food security, however there was a considerable degree of change in all directions within the sample. This kind of change we term 'churning' - meaning that while some households are seeing improvements in food security, at the same time relatively equal numbers are seeing theirs worsen. Dividing up respondents into five equally sized quintiles at the baseline shows the extent of this churning; by the second wave of the survey, most households had moved position by at least one quintile and, most surprisingly of all, sometimes leapfrogged from the bottom to the top of our distribution or vice versa (this is illustrated in the graphs on pages 15-17 in the main report). Whether our findings show us evidence of greater churning amongst the poor will require a further wave of survey data to identify whether households remain on the same trajectory, or, conversely, whether those on upward trajectories fall back, and those on downward trajectories recover.

The extent of churning in relation to livelihoods and wellbeing is reflected in our findings on people's receipt of social protection or livelihoods assistance. Most households do not receive such support in both waves and, yet, satisfaction with support received is high. We find, overall, that households that started receiving **livelihood assistance** between waves also saw an improvement in food security. Despite having only two waves of data so far, the positive association between livelihood assistance and improved food security raises questions about what the longer-term implications of such interventions might be.

We would normally expect **social protection** to reduce the churning that we see in food security. In fact, we found no evidence of an association between starting to receive social protection at any point during the three-year study period and changes in food security, unlike for livelihoods assistance. Two things may explain this. First, those who had only just begun to receive support would not yet have experienced possible impacts on food security. Second, our broad experience outside of the survey tells us that social protection has a limited impact on outcomes like food security if it is not delivered over a sustained period (HLPE, 2012; Slater *et al.*, 2013).

Switches into certain **livelihood activities** are also associated with changes in food security. In particular, the percentage of households with a member in casual labour increased over time in all countries (by as much as 23% in Uganda and 32% in DRC). Just as households dip in and out of coping strategies at difficult times – especially in response to shocks and stresses – so we suggest that movements into casual labour generally reflect the fact that other sources of livelihood are insecure, unreliable or inadequate in meeting household needs.

We find the unstable and volatile trajectories of change in livelihoods and wellbeing to be strongly associated with shocks and stresses that households continue to face. In four out of five countries, an increase in the number of **shocks** or the number of **crimes** experienced between waves is associated with worsening food security. But people's perceptions of safety matter: there is strong evidence that an improvement in a respondent's perception of safety is associated with an improvement in their food security.

Overall, the key message on livelihoods and wellbeing is that **timelines and trajectories matter** and are far more complex than is often assumed: recovery (and decline) can change quite dramatically within a relatively short time, but the extent to which households can stay on upwards trajectories of improving livelihoods and advances in wellbeing relates to the diverse shocks and stresses that households in conflict-affected situations face.

Households have increased their ownership of bulky household assets over time, but this may not be a simple case of 'putting down roots' in response to reductions in armed conflict.

On the whole, households (often substantially) increased their assets between waves. In DRC, for example, many households doubled the value of their assets between waves, or at least changed their asset portfolio so much as to be barely recognisable by wave 2. The changes in the distributions of assets are initially puzzling, though not entirely surprising given the extent of churning observed. The evidence suggests that some assets can be relatively easy to build up after conflict, but can also be easily lost. There are patterns in the types of assets that households invested in across countries, which supports the theory that households alter the configuration of their asset portfolio depending on their changing physical environment and security situation. Many countries show increasing ownership levels of bulky, durable and often domestic assets: for example, ownership of tables and chairs increased from 58% to 76% in DRC while ownership of a bed grew from 70% to 90%. Another cluster of assets that increased substantially in all countries (to a lesser extent in Pakistan) is electronic goods, such as mobile phones, televisions, fans and air-conditioning units - also solar panels in Uganda. Apart from mobile phones, many of these assets are not portable and investment in them often corresponds with a reduction in reported conflict. This change in security is particularly stark in Pakistan, where 99% of households reported fighting in their area between 2009 and 2012, and only 4% between 2012 and 2015.

But whether this decline in conflict and rise in the purchase of bulky assets represents 'putting down roots' is up for debate, as our survey data do not allow us to disentangle causality. The relationship between fighting, security and investment is not straightforward: at the same time as reporting less fighting, there is little evidence that households perceive themselves to be safer. Furthermore, our data and anecdotal reports indicate that households frequently bought bulky items on credit, so we need to explore further any association between a reduction in conflict and the expansion of credit markets, as well as the extent to which asset accumulation is a sign of confidence in the security situation or taking advantage of new financial opportunities.

It's not access to services but experiences of them that matter most for citizens' perceptions of government.

State legitimacy has become a fundamental outcome for donors and aid agencies as they seek to help build more peaceful, responsive and embedded states (European Report on Development, 2009; OECD, 2010). Currently, one of the primary ways in which external agencies seek to enhance legitimacy is to invest in better service delivery. Therefore, one of the objectives of this panel survey is to examine whether (and under what conditions) the delivery of services contributes to legitimacy, and to assess the credibility of theories of change that place service delivery as a central element of building state legitimacy. So, what did we find? Our data show no significant correlations between changes in people's access (measured in journey time) to health, education and water services, and changes in their perceptions of government actors. For policy-makers this suggests that, on the whole, improving the time it takes to reach a service is not likely to make a difference to people's perceptions of government. There are also no significant associations between receiving livelihood assistance and perceptions of government. Starting to receive social protection between waves has a few significant associations with changing government perceptions, but these examples vary between countries and levels of government. There are many good justifications for improving access to services, but the idea that to do so leads to a state legitimacy dividend should not be at the top of that list.

In most cases, there is no statistical association between changes in **satisfaction with services** and perceptions of government, although becoming satisfied with the health service when dissatisfied previously is associated in some places with improved perceptions of government. In the water sector, there were no significant results linking changes in perceived water quality to perceptions of government.

On the whole, there is no relationship between changes in who runs the health centre and changes in perceptions of government, apart from in DRC where a switch to perceiving that the government runs the health centre is associated with a worsening of the perception of central government. There are a few significant associations (mostly, but not all positive) when the government is perceived to have started running the water service. The implication of this finding is that we should rethink the frequently stated view (e.g. Batley and McLoughlin, 2009; Ghani *et al.*, 2005) that the continued presence of donors or international non-governmental organisations (INGOs) delivering services in post-conflict situations undermines state legitimacy by crowding out the state.

The most consistent finding from the five countries is that **problems with service delivery** appear to undermine perceptions of government. Experiencing problems with a service is associated with worsening perceptions of government actors, particularly in Pakistan. At the same time, however, having **knowledge of grievance mechanisms** or **attending meetings** about services is associated with improved perceptions in Nepal, Sri Lanka and Uganda. Overall, the evidence shows that people care less about *who* provides services, and more about the *quality* of those services. Problematic service delivery potentially affects not just people's relationships with and attitudes towards local-level providers — whoever they might be — but also attitudes towards the government itself.

The implication is that it is as important to concentrate on *how* services are delivered – meaning whether people are consulted about service delivery or participate in decision-making, whether accountability mechanisms exist, whether people view the processes as fair – as on *what* is delivered. Furthermore, the factors that are associated with worsening perceptions (problems with services) versus improving perceptions (grievance mechanisms, community meetings) may not be simply opposite sides of the same coin. It is not yet fully clear if and how the dual processes of legitimisation and delegitimisation are related, and whether they operate in symmetrical fashion.

Understanding perceptions requires attention to local contexts and relationships

In many cases, it is difficult to find strong evidence of a relationship between access to services and perceptions of government, without considering wider issues and local contexts.

Starting to pay official health centre fees in Pakistan (local and central government) and Nepal (central only) is associated with worsening opinions of government. And while starting to pay official water fees is associated with worsening perceptions in Sri Lanka, they are associated with improved perceptions in Uganda. These results have two implications. First, the affordability of basic services may be considered more of a priority for many people than journey times — and is something that can potentially influence their perceptions of government. Second, understanding how different contextual features intertwine at the local level is key to understanding which features of service design are most likely to result in positive changes in perceptions and, potentially, to contribute to state legitimisation.

Putting together these findings about the importance of local contexts and processes with those above about how legitimisation and de-legitimisation are related, raises questions about how quickly (or slowly) we might expect legitimacy to emerge. SLRC evidence from DRC (and qualitative evidence from other components of SLRC work) suggests that while trust in government can be lost quite rapidly, it takes far longer for it to be rebuilt. This highlights the importance of the kind of historical and political approach to analysing service delivery that Mcloughlin (2015a) promotes, and that can reveal what happens when expectations are set, raised and then unmet. Indeed, there is evidence that service delivery reforms can actually create violent conflict in some circumstances when the rules and patterns of distribution are perceived by some to be unjustifiable and unfair (Mcloughlin, 2017). This is something into which a potential third wave of the survey could provide insight.

From across the different themes covered in the survey, three overarching lessons emerge.

First, that identity and geography appear more important for people's lives than domestic or international aid policies and programmes with state-building objectives. We find that ethnicity and geographical location at baseline are strongly associated with perceptions of government, suggesting there are both identity-based and territorial aspects to legitimacy. This association with ethnicity is country-specific, which raises the question of whether the government is only considered legitimate by specific groups and categories of people. Other outcomes are also strongly correlated with identity and geography: for instance, access to services. The next step will be to carry out further analysis to assess how far ethnicity, geography and gender affect the churning that we find in much of our sample.

Second, whilst donors may be moving away from simple, transactional approaches to state-building ('deliver services - get legitimacy') as evidenced in DFID's framework for building stability (2016), the findings of the SLRC survey suggest that wherever the solutions to building stability are to be found, they are likely to be messy and complicated. The SLRC survey takes us beyond the truism that conflict dynamics are neither linear nor simple, and stresses how all manner of shocks, not solely those related to conflict, continue to disrupt socio-economic recovery, and how certain outcomes (for example reduced conflict and improved safety) don't always run on parallel tracks. Just as Zaum et al. (2015, following Acemoglu and Robinson, 2012) have asserted that, in frameworks for fragile and conflict-affected situations, 'all good things don't necessarily go together', the SLRC survey suggests that, in the conflict-affected situations that we have studied, good things don't necessarily work in the same direction.

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Finally, the experiences of establishing longitudinal panels in DRC, Nepal, Pakistan, Sri Lanka and Uganda suggest **we can recalibrate our expectations of research methods in fragile or conflict-affected countries.** A combination of luck and good design has allowed the SLRC to deliver a robust and valuable panel data set in some particularly difficult contexts where quantitative research is often assumed to be too difficult, too expensive and too risky. The value of a longitudinal panel is also proven: it has allowed us to build an understanding of the dynamics of people's lives – especially churning – that could not have been identified using other quantitative methods.



Tailor, Afghanistan. Credit: Richard Mallett, edited by James Mauger.

1 Introduction: what, why and how?

An estimated two billion people live in countries affected by fragility, conflict and large-scale violence (World Bank, 2016). In settings like these, public goods provision, equitable growth and rights-based development are at their most challenging, which is why 60% of the world's poorest people are predicted to live in such countries by 2030 (OECD, 2016).

It is for this reason that the World Bank (2011: 1) cites insecurity as a 'primary development challenge of our time' in its 2011 World Development Report, Conflict, Security and Development. It is also why, in its new economic development strategy, DFID (2017: 23) highlights the 'acutely challenging' nature of working in conflict-affected environments, before reaffirming the agency's commitment to spending at least 50% of its budget in such places every year up until 2020. The plans and pledges of numerous other development actors, from bi- and multi-lateral donors to nongovernmental organisations (NGOs) and new collectives such as the g7+, point to the same underlying message: international energies and investments are increasingly being channelled towards areas characterised by conflict and fragility.

This trend is reflected in the rise to prominence of the international state-building agenda, which today constitutes the framework for engagement in so-called 'failed' and 'fragile' states (European Commission, 2011; European Report on Development, 2009; International Dialogue on Peacebuilding and Statebuilding, 2011; OECD, 2007). The logic here is that a country's best chances of progress, peace and development lie in creating a strong, capable state. As a result, each year, billions of aid dollars are channelled towards programmes and reforms designed to build both the capacity *and* legitimacy of states – or more often than not, of governments – in conflict-affected situations.

With conflict and fragility only likely to intensify in coming years, it is more important than ever to understand the processes that external actors are trying to support. At a time when aid spending is under increasing public pressure domestically, effective and appropriate policy requires high quality empirical evidence to ensure that investments are targeted correctly.

But the evidence base is still patchy. Despite advances in recent years, numerous reviews show that processes of recovery, transition and state-building remain only partially understood (Carpenter *et al.*, 2012; Domingo *et al.*, 2013; Evans, 2012; Fritz and Rocha Menocal, 2007; Mallett and

Slater, 2016; Rocha Menocal, 2015). In particular, relatively little is known about how these processes unfold and play out both *over time* and *under different circumstances*, which presents a challenge for policy-makers looking for workable, best-fit solutions. It is perhaps (partly) for this reason, that blueprint approaches to programming continue to dominate (Hilhorst *et al.*, 2017).

1.1 What has SLRC done?

Since its establishment in 2011, the overarching purpose of the Secure Livelihoods Research Consortium (SLRC) - a cross-country policy research initiative funded by DFID, Irish Aid and the European Commission - has been to fill in some of this evidence gap. As a multi-year programme, SLRC has been centrally concerned with questions of transition, particularly what processes of livelihood recovery and state-building look like following periods of conflict. It has sought to do this from a primarily micro-level perspective, interested less in the 'big picture' machinery of transition (power-sharing deals, formal agreements, rules and reforms) than in the way such things translate into actual change in the lives of individuals and households - or not. Are citizens getting better or worse off over time, or simply stagnating? What drives these changes? And how do rates of progress and decline vary across different social groups?

Understanding socioeconomic change of this nature is possible only when appropriate evidence exists. This, in turn, requires the availability of reliable longitudinal data that can measure shifts, fluctuations and consistencies in the performance of a given unit of analysis (e.g. an individual, a household) against a set of outcome indicators between at least two points in time.

To this end, and featuring as a core element of the SLRC's research agenda, the Consortium has established longitudinal panel surveys with individuals as the unit of analysis in five countries: DRC, Nepal, Pakistan, Sri Lanka and Uganda.¹ This synthesis report presents and discusses the findings across these five countries, drawing specifically on two waves of panel survey data. Data collection for the first wave took place between September and October 2012 for DRC, Nepal, Pakistan and Sri Lanka, and in January 2013 for Uganda. The second wave followed three years later, except in Uganda where the follow-up happened after two years.² Table 1

summarises the number of respondents per country, as well as the rate of attrition – i.e. respondent drop-out – between the two waves.

Table 1: Number of respondents per country and panel wave

	Wave 1	Wave 2	Found (%)	Attrition (%)
DRC	1,243	1,040	84	16
Nepal	3,176	2,855	90	10
Pakistan	2,114	1,772	84	16
Sri Lanka	1,377	1,183	86	14
Uganda	1,857	1,554	84	16
Total	9,767	8,404	86	14

The initial 'wave-1' sample sizes were inflated to allow for attrition. This means that, even when some respondents 'drop out' of the sample because they cannot be reinterviewed for whatever reason, the sample remains representative at a specific administrative or geographical level in each country at the time of the first round. As the figures in the table show, actual attrition rates range from 10% (Nepal) to DRC, Pakistan & Uganda at 16%. Overall, 8,404 of the original 9,767 respondents were reinterviewed in 'wave 2', meaning our survey teams managed to find six out of every seven individuals they sought to re-interview in 2015. This is somewhat remarkable for two reasons: first, all contexts here can be considered conflictaffected to varying degrees; and second, attrition rates in even stable environments can sometimes reach upwards of 20% (Hill, 2004; Outes-Leon and Dercon, 2008).

A panel survey at the individual level, such as this, offers an opportunity to go beyond cross-sectional analysis by allowing us to: i) *directly track* changes in people's lives over the past two to three years; and ii) identify factors that share an *underlying* association with those changes. Compared to the more standard cross-sectional approach, this enables us to better explore and understand potential causal relationships, and to build a multidimensional picture of development and change over time. The survey data has generated information on three broad themes:

 People's livelihoods (income-generating activities, asset portfolios, food security, constraining and enabling factors within the broader institutional and geographical context)

¹ At the baseline SLRC had also intended to establish a panel survey in South Sudan, albeit in a different manner where we started with an existing survey by the FAO and intended to track these individuals. This unfortunately became impossible with the renewed outbreak of violence in December 2013.

² The second panel wave was moved forward by one year to avoid coinciding with presidential elections in Uganda in February 2016.

- Their access to or experiences with basic services (education, health, water) and transfers (social protection, livelihood assistance)
- Their relationships with governance processes and practices (civic participation, perceptions of major political actors).

1.2 Why have we done it?

SLRC carried out a series of literature reviews in its inception year to inform the direction of its future research agenda. The objective was to establish the scope, size and quality of the evidence base on service delivery, social protection and livelihoods in conflict-affected situations (for the 'global' reviews, see Carpenter *et al.*, 2012; Mallett and Slater, 2012). They reveal knowledge and data gaps, all variously concerned with the broad issue of war-to-peace transition, which the cross-country panel study was specifically designed to address. In particular, these included:

1 Rebuilding state legitimacy and the assumed role of service delivery. Establishing, building or strengthening state legitimacy is a major element of state-building - even if it is one that has been typically overlooked by policy-makers (Teskey et al., 2011). It is argued that 'state legitimacy matters because it provides the basis for rule by consent rather than by coercion' (OECD, 2010: 3), and that 'statebuilding efforts are bound to fail if, in strengthening institutional capacities, the legitimacy of the state is not restored' (European Report on Development, 2009: 93). It is generally acknowledged that donors and other external actors can do relatively little to directly influence legitimisation processes, which are, for the most part, internally driven. Nevertheless, they have an interest in developing a clearer understanding of the following: what makes a state legitimate? What, if anything, can donors do to support a process whereby state-society relations become stronger and more inclusive? And what are the 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?

Although the answers to these questions are quite poorly understood, our reviews reveal a strong and consistent assumption within the policy literature that by supporting service delivery in places affected by fragility and conflict, it is possible for donors to 'increase' the legitimacy of the state (Carpenter et al., 2012). The logic is that because service delivery is generally considered a core function of modern states, it possesses a kind of 'legitimating quality'. Thus, by helping a state come good on this particular function, the idea is that citizens become more likely to accept its authority and comply with its rule. The problem is, there is relatively little empirical evidence to back up this assumption. Certainly, there was very little to go on at the time of the Consortium's inception. In the years since, the evidence base has grown slightly, with fresh learning from Burundi (Stel and Ndayiragije, 2014), Ethiopia (Stel and Abate, 2014), Iraq (Brinkerhoff et al., 2012), Nepal (Fisk and Cherney, 2017) and Sierra Leone (Sacks and Larizza, 2012), to name a few. Accompanying these have been some important efforts to push forward critical and conceptual thinking on the issue (Mcloughlin, 2015a; 2015b). The bottom line emerging from these recent contributions is that service delivery and state legitimacy appear to be linked, but in ways more complicated and nonlinear than often assumed.

2 Tracking livelihood trajectories and identifying determinants. Our initial literature reviews further identify a lack of empirical, longitudinal research on livelihoods in conflict-affected situations (see Mallett and Slater, 2012). Although good in-depth case studies on livelihood strategies in particular contexts can be found, these tend to provide snapshots rather than time-sensitive analyses. In particular, there is a lack of quantitative evidence that tracks how people's lives and livelihoods change as war-to-peace transitions develop, as well as how these trajectories relate to shifts within the wider political, economic, environmental and security environment.

In addition, the reviews also reveal a significant gap in any comparative analysis of whether interventions to support livelihoods have been effective. There is some evaluation and academic literature that examines the impact of projects or programmes, but very little that looks at the overall significance of aid in people's livelihoods and compares the impact of different kinds of support, such as social protection and livelihood assistance.

The decision to use a panel survey as opposed to any other method was based on the types of data so often lacking within the literature. Longitudinal quantitative data can be particularly hard to come by in conflictaffected situations, yet can play an important role in building a picture of how people make a living in such contexts, as well as tracking how this changes over time. And so too with studies of legitimacy: although a notoriously difficult and slippery concept to pin down through empirical research, there has been increasing recognition of the value of citizen-perception surveys in this regard (see, for example, DFID, 2010; Herbert, 2013; OECD, 2010). Policy-making has tended to rely on a 'normative approach' to legitimacy, which is typically based upon external assessments of whether a given state exhibits and upholds the 'right standards' (see McCullough, 2015). By contrast, an 'empirical approach' to legitimacy is one that is based upon analysis of the attitudes and behaviours underpinning state-society relations - in other words, it is populations themselves rather than external evaluators who are the 'referees' of legitimacy (Lamb, 2014). This is where perception surveys come in, adding depth and grounding to understanding legitimacy in volatile contexts, beyond the somewhat 'risky' normative approach often adopted by donors (ibid.: 3). A more detailed explanation of the perception-survey element of this study can be found in Section 5.1.

1.3 How have we done it?

A full and detailed discussion of the methodology underpinning the design of the survey, and

implementation of the fieldwork and analysis is included in Appendix 1. Box 1 provides a condensed description of the method, outlining important aspects of the survey methodology that need to be understood before reading the remainder of this report.

In Section 2, we provide brief yet illustrative descriptions of the five survey contexts, highlighting major changes that took place between waves. Sections 3 to 5 form the analytical core of the report, and are split thematically. Section 3 focuses on livelihood trajectories, Section 4 on service delivery, and Section 5 on governance. These sections are uniformly structured to include: i) a short abstract and infographic of key findings; ii) discussion of the specific measures used and hypotheses investigated; iii) a description of changes in the outcome variables between waves (see Table 2 for the main 'outcome variables' within each key area); iv) an explanation of factors that share an underlying association with the above changes, based primarily on regression analysis findings; and v) a final summary. We conclude in Section 6, recapping the main findings of the study, setting out a series of policy implications, and suggesting areas for future research - again, by theme (livelihoods, service delivery, governance). As mentioned, Appendix 1 provides a full discussion of the methodology, including the design process, data collection, sampling and weighting, and analytical methods.



Image: young women participate in a focus group on teenage pregnancy, Sierra Leone. Credit: Lisa Denney, edited by James Mauger.

Box 1: Methodology and method – key points to note

- 1 We interviewed the exact same individuals at two points in time (2012/13 and 2015).ⁱ This makes the survey a longitudinal panel of individuals, which is substantially different to having two cross-sections of different respondents.
- 2 We interviewed people at the same time of year in both waves (same season, and usually within the same month).
- 3 In administering the second wave, we sometimes found that an individual had moved to a different household, village, or region, meaning we then had to 'track' them. This made fieldwork more difficult and time-consuming for the second wave, and meant that some respondents were unfortunately not interviewed at the exact same time of year in both waves (week or month).
- 4 We used the same survey instrument in both waves, with only minor changes made out of necessity (for example, adding questions to generate information about changes in context between waves).
- 5 The survey is long and thorough generally taking one and a quarter hours to complete and covers a huge amount of ground, meaning that we had to make trade-offs between the depth and scope of questioning.
- 6 Surveys were administered by trained enumerators local to the country and often to the region being surveyed. Surveys were conducted in the local language.
- 7 In the first wave (2012/13), surveys were completed on paper, but in the second wave (2015) four out of five countries used electronic tablets to record survey responses.ⁱⁱ
- 8 Our samples are not representative at the national level. In each case, a primary sampling unit ranging from a village to a sub-region was purposively chosen, from within which a random sample of individuals was drawn.ⁱⁱⁱ
- 9 There was some attrition (drop-out of respondents) in all countries, which averaged 14% overall (see Table 1). Attrition was non-random. To address this, we allocated weights to the remaining sample in wave 2 to restore the original proportions of the sample. These weights are used in the econometric analysis.
- 10 The main analysis consists of regression models run separately for each country and on the list of outcome variables provided in Table 2.^{iv} Two types of regression models are used: Fixed Effects (FE) and Random Effects (RE). The interpretation of the results from these models is slightly different, with the RE model used only to estimate the results for variables that do not change over time (for example, gender).
- 11 In each of the regressions, the same core control variables are included: gender, age and education level (of the household head for household-level outcomes or of the respondent for individual-level outcomes), ethnicity of the household, location at baseline, and urban or rural location. Since we test several hypotheses about how our outcome variables change (see opening discussions of Sections 3, 4 and 5), each regression also contains additional independent variables that we anticipate to be linked to changes in the outcome.
- 12 While our regression models do not provide proof of causal relationships, they do show underlying associations between variables. Further in-depth analysis is needed to test whether these are causal links.

Notes:

- i) The first wave in Uganda was in 2013.
- ii) The exception was Pakistan, where security restrictions prohibited the use of tablets.
- iii) It should be noted though that, for the sake of brevity, we refer to a country sample using the country name. As such, when we refer to Uganda, we are using this
- as short-hand for 'the sample drawn for our study from Uganda', which is in fact representative only of two sub-regions within that country.
- iv) These outcome variables are broadly the same as those used in the baseline analysis (Mallett *et al.*, 2015).

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Table 2: Summary of outcome variables

	Theme	Outcome variable	Explanation and indicator
Section 3	Livelihoods and	Coping Strategies Index (CSI)	Indexes capturing 1) the level of household food security and
	wellbeing	Food Consumption Score (FCS)	2) the quantity and quality of food (see Maxwell and Caldwell, 2008; Vaitla et al., 2015).
		Morris Score Index (MSI)	An index measuring household asset wealth (see Morris <i>et al.</i> , 1999).
Section 4	Access to basic services/	Access to health centre	Journey time (in minutes) to reach the health centre that the respondent typically uses.
	transfers	Access to school (boys/girls)	Journey time to reach the primary school that children attend.
		Access to principal water source	Time (in minutes) taken for a return journey to the household's main source of drinking water.
		Access to social protection	Has anyone in the household received a social protection transfer in the past year?
		Access to livelihood assistance	Has anyone in the household received a livelihood assistance transfer in the past year?
	Experience of basic services/ transfers	Satisfaction with health centre	Overall satisfaction with the health centre.
		Satisfaction with school (boys/girls)	Overall satisfaction with the school.
		Perception of water quality	Is your drinking water clean and safe? (yes/no)
		Impact of social protection	Self perceived impact of social protection on the household
		Impact of livelihood assistance	Did the assistance increase your agricultural/other livelihood productivity?
Section 5	Perceptions of government	Perception of local government actors	1. Do you agree with the statement: The local government is concerned about my opinion? (yes/no)
			2. To what extent do you feel that the decisions of those in power at the local government reflect your own priorities? ('Never' to 'Completely')
		Perception of central government actors	1. Do you agree with the statement: The central government is concerned about my opinion? (yes/no)
			2. To what extent do you feel that the decisions of those in power at the central government reflect your own priorities? ('Never' to 'Completely')

In this section we briefly summarise the contexts of our survey sites, noting any changes occurring between waves. We have kept these short due to considerations of space and scope, however we direct interested readers to the following country reports for more detailed descriptions of the contexts (and their changes):

- Democratic Republic of the Congo (DRC) (Ferf et al., 2016)
- Nepal (<u>Sturge et al., 2017</u>)
- Pakistan (<u>Shahbaz et al., 2017</u>)
- Sri Lanka (Sanguhan and Gunasekara, 2017)
- Uganda (Marshak et al., 2017)

2.1 Democratic Republic of the Congo



The three areas sampled for this study – Nyangezi, Bunyakiri and Nzibira – are in South Kivu province in the east of the Democratic Republic of the Congo (DRC). As outlined in Appendix 1, the sample is not representative at the provincial level and certainly not at the national level. Instead, we focus on life at the village level in these parts of South Kivu.

Since the country first took on its modern name in 1997 following the fall of the dictator Mobutu Sese Seko, DRC has been marked by two devastating civil wars. The transitional government, which took over following the ceasefire in 2002, inherited a damaged infrastructure system and the precedent of politicians who acted primarily for personal enrichment.

2 The survey sites

The subsequent elected governments under Joseph Kabila have been characterised by heavy state extraction with little provision of public services, which are mostly privatised and nearly exclusively funded by immediate users (Bailey, 2011; Rudolf *et al.*, 2015; Weijs *et al.*, 2012). South Kivu has also been characterised by continuing conflict between various militant groups. In this context of a very thin state presence and ongoing fragility, this study examines the links between livelihoods, services and perceptions of state legitimacy.

Some of the three study areas in South Kivu were affected by violent clashes between survey waves. The worst of these was in Bunyakiri between the Rwandan rebel group – the Democratic Forces for the Liberation of Rwanda (FDLR) – and a collection of grassroots selfdefence groups called *Raia Mutomboki* ('children of the community'). Local evidence suggests that the *Raia Mutomboki*, who were at first supported to an extent by the local population, have lost popularity in recent years (Ferf et al., 2016; Stearns et al., 2013).

Another relevant event to our survey was a spike in the perceived threat of witchcraft around the time of the survey. This mostly occurred in Nyangezi, specifically in connection with succession and generational conflicts in which witchcraft was said to play a role (ibid.).

South Kivu has more than 300,000 internally displaced people (IDPs) (OCHA, 2015) and the highly volatile security situation forces large parts of the population to periodically move to safe areas and back (Beytrison and Kalis, 2013; Rudolf *et al.*, 2015). In our sample, over 150 households (around 7% of the sample) were temporarily displaced between waves due to conflict.

2.2 Nepal



Three districts were sampled for this survey: Bardiya in the western *Terai* (marsh and jungle between the

Himalayas and plains), Rolpa in the mid-western hills and llam in the eastern hills (although one sub-site in llam, Chulachuli, is on the Terai). Rolpa was selected for being remote and the district where the Maoist insurgency originated, Bardiya as a Terai district also badly affected by the insurgency, and llam for its comparatively better service provision and lesser impact from conflict.

In Nepal, this study looks at livelihoods, basic services, and state legitimacy six and nine years on from the end of its internal conflict, which has been characterised both as a civil war and an insurgency (Sharma, 2006; Thapa, 2012). The war ended in 2006 without a clear victor, and the peace transition has involved powersharing between different parties to the conflict, largely because the Maoists agreed to work within a political system which they had previously branded as illegitimate.

The political situation shifted considerably between survey waves. At the time of the first survey wave in 2012, a Maoist (UCPN-M) government was in power and embarking on an ambitious reform programme. Less than a year later, the government and the Constituent Assembly were dissolved amid deadlock over the direction of Nepal's draft Constitution. In the subsequent general election, the Maoists were firmly rejected in favour of more conservative parties.

The period between panel waves was also marked by major shocks, among them violent protests and strikes, spikes in inflation, and deadly earthquakes and floods. The second round of our survey took place following several months of protests with road blocks, strikes and demonstrations, some of which were violent. These protests were largely opposing the proposal in the draft Constitution to federalise Nepal into seven provinces, which some claimed would diminish Terai-based ethnic groups' power. This civil unrest affected our survey districts to varying extents.

In 2014 the western region experienced severe flooding and landslides as a result of above-average rainfall. This caused economic destruction and displacement in one of our sites, Bardiya, although no long-term displacement was detected among our sample. The major earthquakes in 2015 caused relatively minimal damage or no damage at all to our survey sites. Nonetheless, the secondary effects of the earthquake on industry (notably tourism) and national infrastructure were felt in our survey sites. During the wave 2 fieldwork in 2015, a border blockade imposed at the Nepali-India border caused massive price hikes, particularly in petroleum products (Nepal Rastra Bank, 2016).

2.3 Pakistan



The sample drawn for this study is from the Khyber Pakhtunkhwa (KP) region in the north-west of Pakistan, which was occupied gradually by the Tehrik-e-Taliban Pakistan (TTP) militants from the early 2000s onwards. Swat district (one of our survey sites), was taken over in 2007 by the TTP, which then began to move into Lower Dir (our other site).

In 2008, a government-led military operation succeeded in forcing the TTP out of Swat and Dir. More than 2 million people were internally displaced during this operation, fleeing to urban areas on the fringes of the conflict zone (Nyborg *et al.*, 2012). They returned after the military victory, only to have their recovery efforts wiped out by devastating floods in July 2010. Most of the infrastructure of Swat and Lower Dir was destroyed, including markets and the means of agricultural production, leading to one of the country's worst humanitarian crises (Suleri *et al.*, 2016).

Although environmental shocks were still reported to some extent between survey waves, this three-year period was a time of vastly greater stability compared to the three years preceding wave 1. This is important to note since many of our questions involve this recall period. The political landscape changed between the panel waves: whereas in 2012 local governments were not functioning and local bureaucracy and civil servants filled the gap, by the time of the survey in 2015, elections had restored the local government. At the national level, the general election in 2013 resulted in the incumbent Pakistan People's Party (PPP) being replaced with a Pakistan Muslim League (PML- N) government. In KP, the Awami National Party (ANP), which had led the provincial government, was replaced by a coalition of the Pakistan Tehrik-e-Insaf (PTI) and Jamaat-e-Islami (JI) in the same elections.

Reports of armed conflict reduced massively between our survey waves although there were a small number of isolated TTP attacks, notably the assassination of members of a peace committee.³ With the fighting over, the Pakistan army withdrew from the area, most noticeably in Swat. Our survey data suggest that the handover of security provision to local law enforcement contributed to people feeling *less* safe than they did in 2012, with a rise in small-scale crime also seen between waves in certain areas.



2.4 Sri Lanka

The three districts sampled for this survey – Mannar, Jaffna and Trincomalee – are in the northern and eastern parts of Sri Lanka, which are both Tamil-majority areas. Prior to the start of our survey, these areas were badly damaged by the 26-year civil war, which displaced 800,000 people (IDMC, 2014) with the majority fleeing

^{3 &#}x27;Peace committee member gunned down in Swat', The Express Tribune, 2 October 2015 (http://tribune.com.pk/story/965898/peace-committee-member-gunned-down-in-swat-3/).

to camps. The 2004 tsunami also wreaked widespread destruction and displacement, as did floods several years later (albeit to a lesser extent). At the time of our first survey, these areas were essentially stable, without conflict, and in the process of economic recovery.

By 2012, President Mahinda Rajapaksa's government had embarked upon a programme of rapid economic development that was popularised as the panacea for reconciliation and durable peace in Sri Lanka (Marcelline and Uyangoda, 2013; Uyangoda, n.d.; Sarvananthan, 2014). In our sampled sites, the implementation of this vision has consisted of top-down economic restructuring, alongside an ever-expanding military that has been increasingly present in public life.

The heavy-handed approach has invited criticism (of the kind reported in Byrne and Klem (2015)) that postwar reconstruction efforts have been used as a tool for the Sinhalese-majority government to exploit defeated Tamil separatist communities. The approach taken by Rajapaksa's government has also been criticised for making employment more casual and increasingly precarious, by pushing for an export-driven economy and powerful private sector (Kidder and Raworth, 2004; Quinlan *et al.*, 2001). A recent survey (Sarvananthan, 2016) finds that the north (which includes Jaffna district) is lagging behind the rest of the country in the quality and quantity of job creation.

Between the survey waves the 2015 presidential election saw President Rajapaksa replaced by President Maithripala Sirisena, who campaigned on a platform of reducing inequality. At the time of the second survey there was little change in policy implementation in our survey sites, however Tamil-majority communities' optimism is reflected in a swell of positive opinion towards central government in our survey data.

2.5 Uganda

The sample in Uganda is representative of two sub-regions – Acholiland and Lango – in the north of the country. These sub-regions are among the worst affected by the conflict between the Government of Uganda and the Lord's Resistance Army (LRA) militia, which took place between 1986 to 2006. This conflict was characterised by extensive violence against civilians, with our baseline survey data indicating that upwards of 40% of households had experienced a serious crime during the war, including violence against individuals and the destruction of property. At its peak in 2005, there were 1.8 million IDPs living in 251 camps across the region, including roughly 95% of the population of Acholiland and one third of that in Lango (UHRC and OHCHR, 2011). According to our survey data, around half of our sample was displaced during the conflict but returned following the retreat of the LRA in 2006.



The north has long had the highest percentage of people living in poverty in all of Uganda (UBOS, 2015), with far lower incomes and education levels than the rest of the country (UNDP, 2015). Following the end of the conflict, the government-led Peace, Recovery and Development Plan (PRDP) was launched to address trailing development outcomes in the north, in particular those concerning the economy. The most recent Human Development Report for Uganda suggests that implementation of the PRDP has seen limited success (UNDP, 2015), which is to some extent reflected in our survey data. Only a small percentage of the population has access to any form of social protection (17%) or livelihood assistance (4-6%). One initiative that the PRDP has rolled out in our sample areas is a project to incentivise hospital births, which is reported to have had a large, positive impact (ibid.).

In terms of the environmental context, evidence provided by the Famine Early Warning Systems Network (FEWS Net) indicates that the harvests in our sample sites immediately before the second survey in 2015 were considerably better than in 2012. Our survey data also reveals a substantial rise in food security by the second wave.



This section explores changes to household livelihoods and wellbeing, and analyses drivers for both positive and negative changes. Although specific geographical and environmental contexts matter a great deal to what happens to people, the five sample populations share three key findings. First, across the waves, average scores for food security and asset wealth obscure significant churning within the sample. What this means is that the lack of sample-wide change belies the fact that most respondents (usually more than 90%) experienced either a substantial increase or decline in food security and assets - as the infographic below illustrates. Second, where investments are made in assets, they are frequently in bulky, durable, domestic assets such as beds and mattresses, or tables and chairs. Accumulating these assets is often associated with a reduction in conflict in the area - as if households are 'putting down roots' - but, yet, this is not associated with an improvement in people's perceptions of their own safety or food security. Third, together these findings show that associations between food security, assets, livelihoods, shocks and conflict are exceedingly complex, and that trajectories out of hardship and into sustainable and secure livelihoods are not linear, but intricate and frequently disrupted.

We often observed a lot of 'churning' in people's food security between waves, as shown in this example from Uganda.



Livelihoods and wellbeing forms the first of three core areas of our survey, and is directly relevant to one of SLRC's core research questions, namely: 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?

As outlined in Table 2, our primary indicators of wellbeing in the panel survey are food security and asset wealth. We ask the same questions at two different points in time (2012/13 and 2015) – but during the same season - and compare changes in responses. In addition, we look at livelihood activities and main source of household income, household debts, migration, and the receipt of remittances. Section 3.1 briefly summarises the analytical framework and indicators. Section 3.2 describes changes in these indicators in each country over time, and in Section 3.3 we report the results of regression analysis with the aim of identifying drivers of these changes. In later sections, we also use the livelihoods and wellbeing indicators as explanatory variables in models of changes in access to and experience of services and perceptions of government.

3.1 Analytical framework for livelihoods and wellbeing

Here, we give an overview of the analytical framework used in our exploration of livelihoods and wellbeing. The baseline synthesis paper (Mallett *et al.*, 2015) provides more in-depth justification for our choice of indicators and hypotheses.

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

- food security (using the Coping Strategies Index (CSI) and Food Consumption Score (FCS))
- household asset ownership (as a proxy for wealth, using the Morris Score Index (MSI)).

A recent analysis of five food-security indicators using 21 representative data sets spanning ten countries shows that the CSI and FCS are orthogonal to each other. This means that they each capture a different aspect of food security and considering them together is thus ideal (Vaitla *et al.*, 2015).

The CSI is a tool for measuring current food access and quantity: the higher the score on this index, the worse off a household is in terms of food security (Maxwell and Caldwell, 2008). Five coping strategies (see Table 3) and their relative severity are now considered to be generally internationally applicable proxies for food insecurity (ibid.). To construct the index, each coping strategy is given a weight that corresponds to its severity (between 0.5 and 4). The overall score of of each household's insecurity index is calculated by multiplying the number of times in the past week (for Uganda)⁴ or past month (for other countries) that each coping strategy has been used by its weight, and then adding together these values. The final index score is a weighted sum that reflects the frequency with which households have adopted particular behaviours over a given period of time. It should be noted that although the index is designed to be universal, the weighting system is arbitrary to some extent, and as a result its distribution will differ from other indicators of food security.

Table 3: Survey questions used to construct the CopingStrategies Index

In the past 7 days, if there have been times when you did not have enough food or	Only one response allowed: 1. Never 2. Rarely (once or twice in the
has your household had to:	3. Sometimes (three to ten
•	times in the past 30 days)
	4. Often (more than ten times
	in the past 30 days)
	5. Always (every day)
a. Rely on less preferred and	

- a. Rely on less preferred and less expensive foods?
- **b.** Borrow food, or rely on help from a friend or relative?
- **c.** Limit portion size at mealtimes?
- d. Restrict consumption by adults in order for small children to eat?
- e. Reduce number of meals eaten in a day?

We do not compare average scores across countries, not least because the survey was conducted in different seasons. Rather, we focus on the extent and direction of

⁴ The timing of our survey in Uganda meant that a 30-day recall period would have included Christmas, a time when food consumption cannot be expected to follow a typical pattern. To reduce the risk of bias we therefore shortened the recall period to one week.

change in coping strategies, to explore where and why some households are faring better over time.

The **FCS** is a measure of food quality. It measures diversity of diet based on the food groups consumed, with nutrient-dense food groups weighted more heavily (Vaitla *et al.*, 2015). More specifically, the FCS is a composite score, which takes the number of food groups (out of a possible eight) that any household member has consumed over the previous seven days, and multiplies this by the number of days that the food group was consumed. The score is weighted by the nutritional importance of the consumed food group. For a discussion of the assumptions required in interpreting these indicators, see Vaitla *et al.*'s comparative study (ibid.).

The **MSI** measures household wealth using the assets owned by a household (Morris *et al.*, 1999), whereby each durable asset owned is weighted by the share of households owning that asset. This means that households are considered better off when they own assets not owned by most households in the sample. The MSI includes all productive household and livestock assets, which differ between countries. The index has been shown to be a good proxy of household wealth in rural Africa (ibid.), and has been used in many other settings too, for example in transition countries such as Albania (Hagen-Zanker and Azzarri, 2010). As is the case for many indicators of wealth, the MSI only captures certain aspects. It is also based on a fixed list of observable components of household wealth, which must be noted as a limitation.

Of course, relationships may exist between asset ownership and food security, the respective proxies for livelihood status and wellbeing. For example, Tschirley and Weber (1994) find that, in previously war-affected parts of Mozambique, whether a household owned land or not determined how many calories were consumed in the household. Across the border in southern Zimbabwe, Scoones (1995) reports strong correlations between wealth rankings and livestock ownership, farm-asset holdings and crop harvests.

We propose that changes in livelihoods and wellbeing can be explained, at least in part, by a set of factors. We have arrived at these – outlined below and presented in a previous synthesis report (Mallett *et al.*, 2015) – via a thorough process of expert consultation and deliberation. Some basic hypotheses related to these factors are listed in Box 2.

Box 2: Hypotheses on changing livelihoods and wellbeing

H1. Households with better-educated members at baseline improve their livelihood and wellbeing outcomes at a faster rate.

H2. Households that are or have been displaced have consistently worse livelihood and wellbeing outcomes.

H3a. Households that have recently (in the last three years) experienced conflict have worse livelihood and wellbeing outcomes.

H3b. Households that have experienced conflict prior to 2012 have a lower rate of improvement in terms of livelihoods and wellbeing outcomes than households that have not experienced conflict.

H3c. Households living in (perceived/actual) safer locations than before have improved livelihood and wellbeing outcomes over time.

H4. Households that have recently experienced a greater number of shocks and crimes compared to the baseline have worse livelihood and wellbeing outcomes over time.

H5. Improved access to basic services is correlated with improved livelihood and wellbeing outcomes over time.

H6. Improved access to social protection and livelihood assistance is correlated with improved livelihood and wellbeing outcomes over time.

The factors that we expect to correlate with changes in livelihoods and wellbeing include:

- Household factors: household-level demographic, religious, ethnic and educational characteristics as well as histories of migration.
- Contextual factors: location, experience of fighting in the area, and perceptions of safety in the neighbourhood and in travel (i.e. moving to work), as well as other indicators of livelihood opportunities/ constraints.
- Shock factors: natural hazards and economic shocks. as well as crime and conflict as experienced by households.
- Service access and quality factors: different levels of access to basic services, social protection and livelihood assistance, and the quality of these services or transfers.

The aim of our quantitative analysis is to test the hypotheses in Box 2. We do this by measuring if and to what extent the above factors determine whether households are better or worse off (household assets) or have better or worse access to food (food security).

3.2 Livelihood and wellbeing indicators: what has changed?

Food security

The five countries show very different patterns of food security and different patterns of change over time (see

Table 4: Coping Strategies Index (CSI) by country and wave

Table 4).⁵ The two African countries – DRC and Uganda - have the highest levels of food insecurity as measured by the CSI. The Asian countries - Nepal, Pakistan and Sri Lanka - have substantially lower average levels of food insecurity. However, in two cases (Pakistan and Sri Lanka) the average over time became higher, which indicates a worsening of food security. Not only do the Asian countries have lower mean scores, typically a large share of the sample have no food insecurity at all (0 on the CSI), with the most extreme case being Nepal where 64% of the sample reported having used no coping strategies.

Table 4 shows the percentage of the sample in each country that saw either no change, an improvement (a lower score in wave 2) or a worsening in CSI (a higher score in wave 2). Most of the 'no changes' in Nepal, Pakistan and Sri Lanka represent households that have a score of 0 (no coping strategies used) in both waves. Uganda shows the strongest trend, with more than 60% of the sample improving their food security between waves.

The FCS shows less difference across countries (see Table 5). This indicator is a weighted index of the quantity and frequency of consumption of different categories of food. In three out of five countries the average FCS score rises between waves, which indicates an improvement, and the remaining two have no statistically significant difference between waves.

The five countries show relatively similar patterns of changes in FCS between waves, with less than 10% maintaining the same score between waves in all countries. In all but one country (Uganda, but only marginally), the majority saw an improvement in their score.

		Average			Change over time (%)			
Country	Mean CSI wave 1	Mean CSI wave 2	% with no food insecurity (CSI = 0). Two-wave average.	No change	Lower (better off)	Higher (worse off)		
DRC	12.5	12.2	2.0%	4.4	46.3	49.3		
Nepal ***	3.2	1.4	63.6%	45.3	37.7	17.1		
Pakistan ***	2.5	4.4	56.6%	34.5	21.1	44.4		
Sri Lanka ***	5.4	6.5	30.7%	16.0	35.8	48.2		
Uganda ***	10.0	7.0	8.6%	7.6	61.6	30.8		

Note: These are weighted means. Statistical significance of the difference between means over time (calculated by a two-sided T-test) is indicated by *** p<0.01, ** p<0.05 * p<0.1.

It should be noted that when we refer to the results for a country, we are using this as short-hand for 'our sample within the country' since we do not have nationally representative data.

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Table 5: Food Consumption Score (FCS) by country and wave						
	Average		Change over time			
Country	Mean FCS wave 1	Mean FCS wave 2	No change	Lower (worse off)	Higher (better off)	
DRC	22.0	22.5	1.6	46.6	51.9	
Nepal ***	39.2	42.0	2.6	39.7	57.7	
Pakistan ***	42.5	44.0	6.5	41.5	52.0	
Sri Lanka **	57.8	58.9	1.7	44.3	54.1	
Uganda	42.7	42.1	0.6	50.3	49.1	

Note: See Table 4.

The CSI and FCS capture different aspects of food security, therefore it is no surprise that they are only mildly correlated (the lowest correlation is -0.11 in Uganda and the highest is -0.39 in Nepal). Accordingly, not more than 30% in any country improved their score on both indicators (this highest was in Uganda) and in one case only 13% improved on both (Pakistan). Only a very small minority saw a large improvement in both indicators – meaning an improvement of more than one standard deviation – with not more than 8% achieving this in any country.

Table 6: Improvements and 'big' improvements in CSIand FCS by country

Country	Improvement in both CSI and FCS (%)	'Big' improvement in both CSI and FCS (%)	Number of responses
DRC	23.1	4.6	1,040
Nepal	25.3	6.5	2,855
Pakistan	13.6	3.6	1,766
Sri Lanka	22.9	5.0	1,181
Uganda	29.9	7.4	1,552

Note: A 'big' improvement is a positive change of more than one standard deviation of the sample as a whole, from a household's starting score.



Figure 1: Change in CSI over time, by country, illustrated using quintiles in waves 1 and 2.

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Whilst the average scores for both CSI and FCS change rather little for most countries between waves, there is substantial change in individual households. If we divide households in each country into quintiles according to their CSI scores (see Figure 1), it is evident how much individual households switch between quintiles. This somewhat chaotic picture contrasts sharply with the average scores, and suggests that, in terms of food security, we have significant churning in our sample whereby at any given moment the vast majority of households are either on upward trajectories or are slipping backwards. With only two waves of the panel to analyse, the extent to which these trajectories are cyclical - for example the result of household development cycles, or broader structural changes in the economy on which only some households can capitalise - cannot be confirmed. However, the analysis so far suggests that there is little that is linear or static about food security in our study areas.

Asset wealth

To approximate household wealth we use the MSI weighted asset index (based on Morris *et al.*, 1999). This generates a score for each household based on the number of assets owned from a pre-determined list. Crucially, these assets are weighted inversely to their frequency across the whole sample, so that rarer assets receive higher scores. The list of assets varies in each country, because it must be context-specific in order to accurately capture *relative* differences in wealth. Subsequently, it is not possible to directly compare scores across countries, so we instead look for common patterns of change in our samples over time. An example is shown in Figure 2 – changes of individual households are relative to other households.

A majority of households increased their asset wealth over time in all five countries, as measured by the MSI. Nonetheless, a sizeable proportion in each country saw a decrease in asset wealth (between 31% and 41%). Given that the MSI has a large range – in our case between 400 and 1000 – we can divide the scores into 'minor' and 'substantial' changes. Again, since the units of the score are meaningless in their own right, we classify a change of +/-10% of the baseline value as a minor change. Figure 2 shows that a large majority of households (around 90% on average) in all countries have experienced a change in their asset wealth of at least +/-10%.

To add scale to this, the average MSI score in all countries is around 30 points, but the standard deviation within households (i.e. the average variation between their score in wave 1 and wave 2) is around 19 points. In DRC, we asked respondents to also state the value of assets, allowing us to calculate that households owned assets worth the equivalent of US\$223 but that between waves the standard deviation within a household was on average US\$267. This shows that



Figure 2: The proportion (%) of households changing their asset wealth (MSI) between waves, by country

households in these contexts routinely double (or halve) their asset wealth between waves, or at least change the configuration of their asset portfolio so much in three years as to be barely recognisable. Similarly to the churning found for CSI and FCS scores, these MSI distributions are puzzling though not entirely surprising.

There are other possible explanations. The evidence also indicates that assets, or at least some of them, may be built up relatively easily after conflict. This contradicts other studies' findings, for example Moya's and Ibáñez's (2009) work in Colombia, which finds that households struggle to recover assets following conflict, though at a higher level of assets. But it concurs with Bellows and Miguel (2009), who find no evidence of lasting impacts on asset ownership following the Sierra Leone civil war, as well as Miguel and Roland (2011), who have similar findings for Vietnam.

The answers to these puzzles lie in more detailed country analysis, rather than in the aggregated findings presented here. In Uganda, for example, it is suggested that households may choose, depending on circumstances, to save money in other ways not captured by the asset score (Marshak *et al.*, 2017). An increase in MSI could represent households 'cashing in' these other savings pools. In Sri Lanka, it is argued that credit markets have expanded rapidly and the increased assets in the survey areas may be bought on credit (Sanguhan and Gunasekara, 2017).

The types of assets that households invest in appear to support the theory that households change the configuration of their asset portfolio depending on their changing physical environment, as similar types of assets have increased in popularity between waves across countries. Across most of the countries, increases in aggregate household asset scores result from increases in 'durable household goods', including bulky items such as fridges, beds, mattresses, and tables and chairs (see Table 7). In this category, we see increases of between 10 and 20 percentage points in the proportion of households owning that item - for example, in DRC, ownership of table and chairs increased from 58% to 76% in three years, and ownership of a bed grew from 70% to 90%. These changes outweigh increases in other types of assets. Another cluster of assets that has increased substantially in all countries (although to a lesser extent in Pakistan) is 'electronic goods': for example, mobile phones, televisions, fans and air-conditioning units, and also solar panels in Uganda.

Table 7: Increases in household assets by type and country (percentage point increase)

Asset		DRC	Nepal	Pakistan	Sri Lanka	Uganda
Furniture set	Increase	18		18		
	Baseline	58%		56%		
Mattress	Increase	6				8
	Baseline	49%				71%
Bed	Increase	20				
	Baseline	70%				
Washing machine	Increase			10		
	Baseline			54%		
Fridge	Increase		4	9	7	
	Baseline		8%	36%	19%	
Television	Increase	2	6	2	15	
	Baseline	2%	49%	31%	49%	
Mobile phone	Increase	20	7	4	16	5
	Baseline	26%	82%	93%	77%	52%
Fan/air conditioning	Increase		4	2	18	
	Baseline		25%	94%	33%	

Note: Baseline numbers show the percentage of the sample owning that asset in wave 1. Increases between waves represent percentage point increases on the baseline level.

Overall, we interpret the patterns in the accumulation of bulky, durable, domestic assets as being associated with the reductions in conflict that are reported in most countries. We return to this discussion at the end of this section and in Section 6.

Livelihood activities and income sources

The regressions reveal some association between changes in food security and asset wealth, and shifts into different types of employment in the three-year period between waves. In this section we discuss these livelihood patterns for each of the five countries.

Ugandan households had on average 3.6 livelihood activities per household in wave 1 – the highest average of the five countries, followed by DRC.⁶ Households in Asia had lower averages in wave 1: Nepal (2.0), Pakistan (1.9) and Sri Lanka (1.3). The average number of activities rose over time in Uganda, DRC and Nepal, while it fell in Sri Lanka and remained the same in Pakistan (see Figure 3). The different number of activities across countries is partly accounted for by differences in average household size (they are larger in Uganda and DRC than in Nepal and Sri Lanka, but households in Pakistan are the largest by far), although cultural and contextual factors play a part too.

Notably, in Uganda, where there is the largest increase in average number of livelihood activities, the regressions reveal that adding any new activity to a household's livelihood portfolio is associated with an increase in asset wealth.

The question, however, is whether the addition of more livelihood activities is a sign of 'improving' or 'worsening' conditions for those households. The cases are not clear-cut, but we can look at the type of activities that increased or decreased over time, and make a normative judgment about which provide more stable sources of income.

People cultivating their own fields is the most common livelihood activity in four out of five countries (Sri Lanka is the exception). This is not surprising, given that rural populations are the focus of this study. The second most common livelihood activity overall, and the most common in Sri Lanka, is casual labour. This refers to daily-wage labour, which is often, but not always, low paid and insecure. The proportion of households





Note: These are weighted means. Statistical significance of the difference between means over time (calculated by a two-sided T-test) is indicated by asterisks where *** p<0.01, ** p<0.05 * p<0.1.

6 There are some minor differences here in what is being counted. In Uganda, Nepal and Sri Lanka we count the number of livelihood activities that household members engage in, regardless of whether they generate income. Due to differences in the survey instrument, in DRC and Pakistan we count the number of income sources of the household.

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Figure 4: Household engagement in livelihood activities (% two-wave average, by country)

engaged in other livelihood activities is fairly consistent across countries: roughly 20-30% engage in their own business, 10-18% have a household member who works in a salaried private-sector job (Uganda is the exception with less than 5%), and around 10% have a member who works in the public sector (see Figure 4).

In all countries, the percentage of households with a member undertaking casual labour increased over time (see Table 8). In Nepal and Pakistan this increase is fairly negligible (less than 2 percentage points) but in Uganda and DRC the increase is between 12 and 15 percentage points. This means that almost a quarter (23%) of the Uganda sample entered casual labour between waves, and almost one third (32%) in DRC (see Table 8). The regressions indicate worsening food security for those households that entered casual labour for the first time. However, this is only significant in Nepal and DRC.

Although starting casual labour between waves in Uganda is associated with a decline in asset wealth, the variable for adding one extra livelihood activity between waves is associated with an increase in asset wealth – meaning that those households that added casual labour experienced a smaller increase in asset wealth than those adding another activity. When we look at the basic average changes in asset wealth (MSI) without controlling for other factors as in the regressions, we see that in four out of five countries those households that started casual labour between waves saw the

Table 8: Changes in participation in casual labour, bycountry

	Wave 1 (%)	Wave 2 (%)	Percentage point difference	% households entering casual labour for the first time
Nepal	48.7	50.2	1.5	17.1
Pakistan	35.5	37.3	1.8	16.9
Sri Lanka	47.8	51.2	3.3	18.6
Uganda ***	64.3	76.4	12.1	23.1
DRC ***	46.0	61.9	15.9	31.7

Note: See Figure 3. 'For the first time' means that the household did not engage in casual labour at the survey baseline although we do not have any information prior to this.

smallest improvement in MSI. Although the evidence is not especially strong, the data suggest that taking up casual labour is a sign of worsening circumstances for a household.

Debt

Levels of household debt are high in all of our samples except Uganda. The highest number of households with a debt were in Pakistan, where almost 60% of the sample had a debt in *both* waves (Table 9). Here, levels of borrowing also rose considerably between waves, to the point that almost 80% of the sample had a debt in 2015. Borrowing was also high in Sri Lanka and rose very slightly between waves. The DRC saw a large increase in the percentage of the sample with with debts. In this country, however, there was much more switching in and out of debt between waves as only 35% had debts in both waves. In Nepal, where levels of borrowing were the same as in DRC, 46% had debts in both waves. Uganda is the exception, where only 32% of the sample had a debt in either of the two waves and only 9% had debts that lasted across both waves. We do not, however, have information on the value of loans.

The regression analysis (described in Section 3.3) reveals that taking on debt between waves is also consistently associated with worsening food security, and in one case a fall in asset wealth. This suggests that taking out a loan is, in most cases, accompanied by a period of food scarcity, however, we cannot be sure what causal relationships produce this result. The data provide some clues - for example, in the case of DRC, the most common reasons for borrowing money were 'immediate basic needs' and 'health costs', which suggests borrowing is, in many case, a response to shocks. The effects of these shocks may persist for some time: for instance, respondents in Nepal quite often stated that they had borrowed money for a wedding (among other reasons for borrowing). Where we see a simultaneous decline in food security among these households, it may be that this third factor - the considerable cost of a wedding - influences both food security and asset wealth.

We should, however, be cautious of assuming that debt is a bad thing. As we will see in the next section on migration and remittances, debt can be used to service a new or expanded livelihood activity and households may endure hardships in the immediate term in the hope of a better future. Similarly, where the end of conflict means the reestablishment of normally-functioning credit markets, a resurgence of debt is clearly not a bad thing in itself.

Migration and remittances

Examining the levels of economic migration and receipt of remittances in each country indicates variable trends between countries (Figure 5). Internal migration rates for work are by far the highest in Sri Lanka, where almost the whole sample (89%) had someone from within the household migrate internally in either wave. However, this is mostly accounted for by migration levels in wave 1, in which 87% had an internal migrant, since in wave 2 this

Table 9: Incidence of household debt across waves

	Anyone within household owes money to anyone (%)		Debt across waves	
	Wave 1	Wave 2	% always in debt	% went into debt between waves
DRC ***	50.7	61.4	34.6	27.2
Nepal**	64.7	61.7	46.3	15.6
Pakistan***	69.5	78.2	59.3	19.1
Sri Lanka	69.3	70.3	54.7	15.7
Uganda***	15.9	21.6	8.6	14.2

Note: Asterisks indicate where the difference in the percentage who are in debt is statistically significant across waves, where *** p<0.01, ** p<0.05, and * p<0.1'

figure had shrunk to only 22% of households. The DRC also shows high levels of internal migration for work, but with the level rising slightly between waves. Pakistan has the highest percentage of households within which an individual had migrated internationally for work.

Remittance receipt is highest in our samples from Nepal and Pakistan, which is consistent with what we know about the importance of remittances to these economies. In Nepal, remittances contributed 32% of gross domestic product (GDP) in 2015, up from 15% in 2005; while in Pakistan this figure was 7% of GDP in 2015, up from 4% in 2005.⁷ In our survey population, Nepal saw the largest increase in the percentage of households receiving remittances between waves (from 25% to 32% in three years).

In Nepal, we also asked whether a household had taken a loan in order for a member to migrate. The number of households reporting a migration loan are higher than those reporting an international migrant within the household roster. For example, 20% of households had a migration loan in wave 2, while only 10% had an international migrant leave in the last 3 years. This suggests a time lag in the data, which implies that individuals migrate for long periods of time. Analysis of the baseline data for a separate study of migration from Rolpa finds that a typical migration loan was equivalent to around 97% of annual household expenditure (Hagen-Zanker *et al.*, 2014). Labour migration is an investment that often requires initial borrowing, so this figure tells us

⁷ Data from World Bank: http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS. The equivalent figures are, for Sri Lanka, 8.5%, for Uganda, 3.8%, and for DRC, 0.01% in 2015.

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Note: 'Ever' refers to either of the panel waves, which collectively cover a six-year recall period (2009-2015).

something about the extent to which this type of credit is available, at least in one of our survey areas.

As the next section demonstrates, the regressions indicate that in some cases economic migration and remittances are associated with changes in wellbeing and livelihood outcomes. In Nepal, starting to receive remittances between waves is associated with a rise in both food security and asset wealth (the latter roughly equivalent to 6% of baseline wealth). In Sri Lanka, remittance receipt between waves is associated with a rise in asset wealth of roughly 17% of baseline wealth. However, having had a household member migrate internally in the same period is associated with a 21% fall in asset wealth, which is larger than the gain through remittances. Similarly, having had a household member migrate internationally for the first time between surveys is associated with a worsening in the quality and quantity of food consumption (FCS).

3.3 What explains changes in people's livelihoods?

Food security

The results of the fixed-effects regression reveal several clusters of variables that are associated with changes in food security. Only the statistically significant results are discussed here, unless specified otherwise. Also, the results

presented here are conditional correlations, meaning that they apply when *all other factors are held constant*. In the interest of brevity this point is not made again although it should be considered to apply to all results presented.

The first cluster of variables relates to the experience of shocks and crimes. Here, we see that the experience of certain shocks and crimes during the three years between waves is associated with a worsening of food security (a rise in CSI score), albeit with considerable variation across countries. In Nepal, those households that experienced a health shock or the death of a household member reported more coping strategies and a fall in food quality/diversity. In Uganda, those who experienced an environmental shock in wave 1 (when they had not done so in wave 2) also saw a fall in food security. In four out of five countries an increase in either the number of shocks or the number of crimes reported between waves is associated with a fall in food security (shocks are statistically significant in DRC and Sri Lanka, and crimes statistically significant in Nepal and Uganda). An increase in the number of shocks between waves in Uganda and certain shocks in Sri Lanka is also associated with a fall in food quality/diversity, as is an increase in the local crime rate in Pakistan. These results are relatively small in magnitude, however, representing roughly a 2% decrease in the average FCS at baseline in Uganda, roughly 3% in Sri Lanka and roughly 4% in Pakistan. These findings are consistent with those

of another recent panel survey in northern Uganda, which shows that more shocks increase the risk of backsliding into poverty (Scott *et al.*, 2016), and support our hypothesis that 'Households that have recently experienced a greater number of shocks and crimes, compared to the baseline, have worse livelihood and wellbeing outcomes over time' (hypothesis H4 in Box 2).

We have only been able to test correlations with the experience of conflict between waves in two countries (Nepal and the DRC). The only significant result was in Nepal, where those who reported fighting in their area in wave 2 but not in wave 1 also saw a decline in both food security and food quality/diversity. We therefore do not find conclusive evidence to support the hypothesis that 'Households that have recently (in the last three years) experienced conflict have worse livelihood and wellbeing outcomes' (H3a, Box 2).

In the same thematic cluster there is strong evidence that an improvement in a respondent's perception of safety is associated with an improvement in their food security (measured by CSI). For example, in three out of the four countries (Nepal, Pakistan, Uganda) that include 'feels safe outside the village' in their regression, there is a strong, significant association between switching from not feeling safe outside the village in wave 1 to feeling safe in wave 2 and an improvement in food security (in the remaining case, DRC, the result was the same but just on the cusp of being statistically significant). However, it was only in one country (Nepal) that an improvement in the perception of safety within the village is associated with an improvement in food security. The association between improved safety and food quality/diversity (measured by the FCS) is much less consistent, with Nepal and Sri Lanka showing a positive association between improved perceptions of safety and food quality/diversity, and DRC and Pakistan showing a negative association. These results are split between 'inside-village' and 'outside-village' safety. We therefore only find partial support for the hypothesis that 'Households living in (perceived/actual) safer locations than before have improved livelihood and wellbeing outcomes over time' (H3c).

The second cluster of indicators associated with changes in food security relate to **changes in livelihood activities**. Households that improved their MSI between waves also saw an improvement in food security in three out of five countries (Nepal, DRC, Uganda) and an improvement in food quality/diversity in four out of five countries (Nepal, Sri Lanka, Uganda, DRC). This association is likely connected to another finding, that households that started receiving livelihood assistance between waves also saw an improvement in food security in three out of four countries where this was measured (Nepal, Pakistan, Uganda), and an improvement in food quality/diversity in two countries (Pakistan, Sri Lanka). There is no consistency, however, in how livelihood assistance relates to changes in food quality/diversity, despite some statistically significant results. The results for receiving social protection are also either not significant or inconsistent across the food-security indicators, meaning that we find only partial evidence to support the hypothesis that 'Improved access to social protection and livelihood assistance improves livelihood and wellbeing outcomes over time' (H6).

Switches into certain livelihood activities are associated with changes in food security. However, again, there is considerable variation across countries. Households that had a member start working in casual labour (where previously there had been none) also experienced a fall in food security between waves in two countries (Nepal and DRC), and a fall in food quality/diversity in one country (Nepal). Though the regression results themselves do not imply causality, our interpretation is that poor performance in other livelihoods sectors – particularly own food production – leads to worsening food security and drives households to seek income from casual labour.

Starting up other livelihood activities aside from casual labour has a more favourable association with food security. Having a household member start 'selling goods' or 'own cultivation' is associated with an improvement in FCS in three countries (Nepal, Pakistan and DRC). In DRC, an increase in a household's *number of income sources* between waves is associated with an improvement in food quality/diversity.

Going into **debt** between waves is also consistently associated with worsening food security in three countries (Nepal, Pakistan, Sri Lanka) and a fall in food quality/ diversity in four countries (Nepal, Pakistan, DRC, Uganda). In this case any direction of causality is more difficult to discern: households may take credit to buy food when they face hunger, or they may 'tighten their belts' after taking credit in order to strengthen their livelihoods. **Migration** has some limited but logical association with food security: starting to receive remittances between waves is associated with a rise in food security in Nepal. Having an international migrant leave for the first time is associated with a worsening of food quality/diversity in Sri Lanka. These findings are consistent with complementary SLRC work in Pakistan and Nepal, which shows that absorbing
the costs of migration can be particularly difficult following the first period of migration (Hagen-Zanker *et al.,* 2014).

There are also some strong associations between so-called 'time invariant' factors and changes in food security. For the purposes of our model, we artificially fixed at baseline certain core characteristics of the household, such as the gender of the household head, household ethnicity, average education level of adult members, location, and pre-baseline experience of displacement. In Sri Lanka we find that female-headed households (FHHs) fare worse than their male-headed counterparts on both indicators of food security. The same is true in Pakistan for food quality diversity only. In Sri Lanka and Nepal, households of certain marginalised ethnicities fare worse on both food indicators than similar households in the majority or wealthiest ethnic group. In Nepal, as well as in Uganda, households that had been displaced due to conflict but had returned prior to baseline still experienced worse food security. Although oddly, in Nepal, these households show better food quality/ diversity than the non-displaced. We therefore do not find full support for the hypothesis that 'Households that are or have been displaced have consistently worse livelihood and wellbeing outcomes' (H2a).

Education is one of the strongest and most consistent explanatory factors for food-security outcomes in four out of five countries (Sri Lanka being the exception). The higher the household's average level of education (among adults), the higher their food security. As expected, food quality/diversity is also better among more highly educated households in three countries (Nepal, Pakistan and DRC). These results indicate that there is a clear association between education and having enough to eat. However, if there is a causal relationship then it could work in either direction since our analytical model cannot tell us whether one of the changes is driving the other. Nonetheless, we find strong evidence that 'Households with better educated members at baseline experience better livelihood and wellbeing outcomes' (H1a).

Asset wealth

Unsurprisingly, changes in household livelihood activities has a strong association with changes in asset wealth in three of the five countries (Pakistan, Sri Lanka, Uganda). In Nepal, for example, a household that had a member start 'own cultivation', 'selling goods' or their 'own business' also experienced a rise in asset wealth between waves. Similarly, those households in DRC in which a member started 'own cultivation to sell' or their 'own business' between waves also experienced a simultaneous rise in asset wealth. In contrast, when a member of a household in Uganda started casual labour between waves, this is associated with a fall in asset wealth. However, if a Ugandan household added any other livelihood activity to its portfolio between waves it saw an increase in asset wealth. In the case of DRC, we include in the regression a variable for each possible change in number of income sources (for example, -2, -1, +1, +2 etc.). The changes are plotted in Figure 6, illustrating that the association between a change in number of income sources and change in MSI is almost perfectly linear and correlated.





Change in number of income sources (Wave 2 - Wave 1)

Note: R² is a measure of how closely the points are fitted to the estimated regression line. The highest value it can take is 1 so in this case the line quite effectively predicts where the points will be.

Other shifts in income sources are associated with changes in asset wealth, for example remittances and social protection transfers. In Nepal and Sri Lanka, households that started to receive remittances between waves also saw a rise in asset wealth roughly equivalent to 6% and 17% respectively at baseline. In Nepal, receipt of remittances is also associated with higher food security between waves. Interestingly, in Sri Lanka, the internal migration of a household member between waves is associated with a reduction in asset wealth equivalent to 21% of baseline wealth on average. What we could be seeing here is evidence of the enormous debt that households often take on to finance migration (see, for example, Hagen-Zanker et al., 2014), as well as the dividends that come from remittances at a later stage. In Nepal, starting to receive social protection between waves is also associated with an increase in asset wealth. Even though this is a fairly modest increase, on the whole, the results support the hypothesis that 'Improved access to social protection and livelihood assistance improves livelihood and wellbeing outcomes over time' (H6). However, the variable that captures falling into debt between waves is only significant in one country (Nepal), where it is associated with a fall in wealth.

A handful of variables are strong explanatory factors of changes in asset ownership, but this is easily explained. For example, in four of our sample countries (Pakistan is the exception), when a household grew in size, asset wealth also increased - more people require more possessions. In three countries (Nepal, Sri Lanka, Uganda), where a household became older, on average (i.e. more household members joined the workforce), asset wealth also increased - more individuals are bringing in an income. In two countries (Pakistan and Uganda), if a household acquired land between waves, asset wealth also increased - the household bought more farming equipment and possibly livestock. Starting to receive livelihood assistance between waves is also significantly associated with an increase in asset wealth of roughly 20% in two countries (Sri Lanka and Uganda).

On the whole, **experiencing shocks and crimes** between waves does not have a consistent association with changes in asset wealth across countries. For example, living in an area in Sri Lanka where inflation rose between waves (as reported by our respondents) is associated with a rise in asset wealth. Similarly, in DRC, respondents who improved their perception of safety outside the village between waves also saw a decline in asset wealth. However, we see that living in an area in DRC where the crime rate rose (within our sample) or where the percentage of the sample reporting threats rose, corresponds with a decline in a household's asset wealth. In Uganda, too, households that reported having experienced more crimes between waves than previously also saw their asset wealth decrease. The evidence here is clearly mixed, therefore it does not support the hypotheses that 'Households living in (perceived/actual) safer locations than before have improved livelihood and wellbeing outcomes over time' (H3c) or that 'Households that have recently experienced a greater number of shocks and crimes, compared to the baseline, have worse livelihood and wellbeing outcomes over time' (H4).

Some of the most consistent explanatory factors are variables such as gender and education that do not change over time, at least as specified in our model. Female-headed households (FHHs) had lower asset wealth than male-headed households (MHHs) in four countries (the exception is Nepal), ranging from 10% to 22% lower with both waves of data combined. The average education level of household members is also strongly associated with asset wealth in four out of five countries (the exception is Sri Lanka). The difference ranges from 4% higher wealth for every additional year of average education in DRC and Uganda, to 36% higher asset wealth among households in Nepal where the average education was having completed secondary school or higher. This result, in combination with the results on food security, lend strong support to the hypothesis that 'Households with better educated members at baseline experience better livelihood and wellbeing outcomes' (H1a), although again we cannot imply causality. It could be that richer households can afford higher education, or that higher educational attainment results in wealth. Both are likely to be true at different moments in time, in different locations, among different households. Location at baseline is also a strong predictor of asset wealth in three countries (Nepal, DRC, Sri Lanka) and ethnicity is a significant explanatory factor in one out of the four countries where it was tested (Nepal).

3.4 Summary

Churning. Whilst many of the average scores for food security appear stagnant, across all countries more than 90% of households experienced some change in their situation. In most countries, a greater share of households improved their food security than became less food secure. However, often, almost as many households moved into a worse situation than an improved one. The evidence of churning reflects other research into poverty and wellbeing in a vast range of countries that note the extent of churning that takes place amongst households

that sit below, on and just above the poverty line (Carter and Barrett, 2006; Edwards, 2015; Hulme *et al.*, 2001).

A cross-sectional rather than panel-survey approach would not have uncovered this finding. Even so, to confirm whether these households are on different long-term trajectories or whether they are churning – that is, caught in cycles of deprivation and improvement – requires a further wave of the panel survey. This would also enable us to identify whether households can use assets to become better off, or whether they remain caught in a low-level equilibrium.

We do find that changes in food security and changes in asset wealth have a strong association, however, and, for the most part, change in the same direction. We do not find evidence that suggests that churning is either worsened or bettered by conflict, but intend to investigate further whether the uncertainties of life in conflict-affected situations exacerbates instability in food security and assets.

Putting down roots? Among the assets that we have seen to increase are bulky, durable, domestic assets such as beds, tables, mattresses and fridges. These investments appear to emerge concurrently with reported declines in fighting between 2012 and 2015, therefore it is possible that a reduction in conflict may allow households to 'put down roots' and invest in assets that would be difficult to transport in the case of displacement due to conflict. At the same time as reporting less fighting, however, there is little evidence that households perceive themselves to be safer, either within their villages or when travelling further afield. Furthermore, worsening perceptions of safety between waves correlate with worsening food security. So, whilst reductions in armed conflict appear to have occurred alongside investments in assets, concern about broader elements of safety and security has arisen at the same time as worsening food security.

There is also a potential information gap as to how exactly households acquire more assets, with a number of explanations emerging that call for more granular analysis of the data. Debt levels are high in general and – from the reasons given for borrowing money and specific evidence from Sri Lanka as to whether items in the asset module were bought on credit – we can identify that some households are falling into debt to buy assets. This is seen alongside a rise in casual labour as a livelihood activity in all of our five countries but, again, fine detail on each of the survey sites is required to situate these findings within what is known about the recovery of labour markets. **Causality and complexity.** There are many other perplexing puzzles emerging from the panel analysis about changing livelihoods and wellbeing. Some findings are counter-intuitive (for example, when fighting is reduced but perceptions of safety decline), others are difficult to explain, and for many we cannot be sure of the direction of causality (for example, whether education levels lead to improved asset levels or *vice versa*).

We cannot know, for example, whether households are indebted because they are food insecure and have borrowed to ensure food consumption, or whether households are food insecure because they have taken loans to start new businesses and, in the meantime, are tightening their belts. This is, in part, a result of our research design, which would have had to be quasi-experimental in order to allow for causality to be established. In some cases, we can start to uncover the underlying processes behind a result by drawing on other SLRC findings and wider research.

To illustrate: the regressions reveal that going into debt between waves is also consistently associated with worsening food food security and, in one case, a fall in asset wealth (Nepal). This suggests that taking out a loan is, in most cases, accompanied by a period of food scarcity. However, we cannot be completely sure what causal relationships produce this result, although the data provide some clues. For example, in the case of DRC, the most common reasons for borrowing money suggest that it is done in response to shocks. And the effects of these shocks may persist for some time. Evidence from Nepal suggests that the considerable cost of a wedding may influence both food security and asset wealth. The early costs of migration undermine household wellbeing, but can be more positive in the longer term when (if) regular remittances are received.

Timelines and trajectories. Overall, the key message on livelihoods and wellbeing is about timelines and trajectories. Recovery (and decline) can be relatively rapid, but the extent to which households stay on upwards trajectories of improvement in livelihoods and advances in wellbeing is strongly influenced by the diverse shocks and stresses that households in conflict-affected situations continue to face. This has implications for the timeline over which governments and donor agencies expect to see improvements, and for which they need to commit predictable resources to fund support programmes and interventions. 4 Tracking service delivery: changes in the provision of basic services and transfers In this section, we focus on people's access to and experience of basic services - meaning healthcare, primary school education and water - and social protection and livelihood assistance. Most respondents reported an increase or decrease in distance-related access to basic services (measured by journey times to facilities) between waves, however this is in parallel with the majority also stating that they are using the same services as three years ago. The discrepancy suggests at least a degree of change in road infrastructure, but may also be the result of respondent recall issues. On the whole, satisfaction with services is high across both waves, and where people's perceptions change they mostly become more positive. Our analysis shows that people's overall satisfaction with a service is associated with a series of variables that relate to how that service is run, including provider, any problems experienced and, most importantly, specific characteristics of a service (e.g. waiting times) - all of which are illustrated in the infographic below. Regarding transfers, we see that few households receive support across both waves, although we find that around a guarter of households in Nepal and Sri Lanka receive social protection support across both waves. Although the receipt of livelihood assistance is generally perceived to be quite useful, subjective ratings of the impact of social protection suggest that, even where transfers are accessed, they are often not sufficient to make much of a difference to households.

Changes in people's satisfaction with basic services are not linked to changes in physical access. But other aspects of service delivery do matter.



Improved frontline aspects of the service, e.g. waiting times

Changing service provider



Physical access, i.e. journey time to service.



Problem with the service Changing service provider

Having to queue

Introduction of fees

Our data cover various aspects of the broad theme of service delivery:

- First, we consider a range of basic services, including education (primary school), health and water.
- Second, we look at four dimensions of people's experiences with these services: i) access, analysed primarily using the proxy of journey time; ii) satisfaction with specific aspects of the services (e.g. staff), including problems encountered with provision; iii) respondents' knowledge and use of grievance mechanisms; and iv) participation in service delivery via meetings and consultation. Dimensions ii to iv in particular can be considered indicators of the quality of provision, and by tracking them we are able to see how access as well as quality shifts over time (or not).
- Third, we extend the traditional service focus to incorporate analysis of two kinds of transfer: social protection (e.g. cash grants, pensions) and livelihoods assistance (e.g. agricultural inputs, trainings). Here, we consider both whether someone in the household is receiving any such transfer in the first place and how that might have changed between waves, as well as respondents' perceptions of effectiveness.

We begin with an overview of how people's access to basic services has changed over time, before looking at the above dimensions in turn. We consider whether the quality of service provision has gotten better or worse in the past three years according to the data on perceptions (i.e. satisfaction), problems and participation and, finally, turn our attention to a discussion about transfers.

4.1 Analytical framework for services, social protection and livelihood assistance

This sub-section gives an overview of the analytical framework used in this part of the analysis. The baseline synthesis paper (Mallett *et al.*, 2015) provides in-depth justification for our choice of indicators and hypotheses.

Because the survey covered a large range of services, we made use of simple – and relatively blunt – proxies for access. In the case of health, education and water we consider return journey times (in minutes) to health centres or hospitals, primary schools and water sources. For social protection and livelihood assistance we consider whether households received any form of support in the year prior to the survey waves. As the survey instrument covers a range of themes and modules, it was simply not practical to ask multiple questions about the specific issue of access to services. Journey time could be asked in a relatively quick and straightforward way, and could also be cleanly and directly tracked over time (thus the measure would have made less sense if we had opted for a cross-sectional design). As a dimension of physical and distance-related access, journey time is also useful from an analytical point of view.

Brinkerhoff et al. (2017) look at what they call the spatial aspects of service delivery, with particular consideration of the links between distance, service access, quality and citizen perceptions. They show that the recent literature particularly that concerned with the health sector, which most research seems to focus on - tends to suggest a 'spatial gradient' for services, whereby greater distances and journey times to facilities are often accompanied by poorer service-related outcomes. This has been found in relation to uptake frequency, maternal and infant mortality, and vaccination rates, with evidence pointing to an association between remoteness of facility and poorer quality of service provision. 'The evidence ... is consistent and clear across countries that service access and quality tend to decline with increasing distance' (ibid.: 3), which suggests that distance-related variables such as journey time are quite good markers of both access and quality.

At the same time, however, we recognise that access is a multi-dimensional concept, which cannot be fully captured by a single distance-related variable (although, as just discussed, it does tell us *some* things). So while journey time is our primary measure, we also draw on other survey data to look at access in a more complete way. This information includes the number of problems experienced, and the (perceived) availability of channels for redress.

Variations in access to services can be explained by a number of different factors, which include:

- Individual and household factors (as in Section 3.1).
- Contextual factors (as in Section 3.1).
- Shock factors (as in Section 3.1).
- Service access and quality factors: Implementation and performance (for example regularity of provision or who provides the service) may affect access to basic services, social protection and livelihood assistance.
 We expect that distance to basic services is likely to be correlated with experience of services.

 Service implementation and performance features: This includes the provider of a service, any problems experienced, and the respondent's knowledge of related grievance mechanisms and community meetings.

We aim to test the hypotheses in Box 3 to determine if and to what extent changes in the above factors are correlated with access to and satisfaction with services, social protection and livelihood assistance. We measure experience in terms of overall satisfaction with the service provided (health and education), whether the water provided is percieved to be clean, and how respondents themselves perceive the impact of the service for social protection and livelihoods assistance.

4.2 Access to basic services: what has changed?

We generally see quite a lot of change in reported journey times for the three basic services covered in the survey – which is true even when we apply a 'five-minute cut-off' to deal with likely measurement error.⁸ However, we also find inconsistency in the 'direction' of that change, with similar shares of households reporting longer and shorter journey times. In every country, the majority of households experienced a change in their journey time to the **health** centre, but there is no clear pattern (see Figure 7). In DRC, for instance, an almost equal share faced longer journey times as faced shorter journeys. In Nepal and Pakistan, most 'switchers' were travelling for longer, while in Sri Lanka and Uganda most households reported shorter journeys.

It seems that people's access to health services is often not static, even over a relatively short interval period. And, as Table 10 shows, the average change in minutes can be

Table 10: Changes in journey time to the health centre(minutes)

	Mean journey time (pooled)	Average change with	Average change with better
		worse access	access
DRC	48.2	41.9	-39.9
Nepal	44.8	46.4	-34.4
Pakistan	34.7	30.3	-33.4
Sri Lanka	36.3	34.7	-45.2
Jganda	115.5	86.4	-117.4

Note: Averages calculated from changes of at least five minutes.

Box 3: Hypotheses on access to and satisfaction with services

H7. Respondents living in households that become wealthier improve their access to and satisfaction with basic services.

H8. Respondents living in households with better-educated members have better access to and satisfaction with basic services.

H9a. Respondents living in households that are or have been displaced have worse access to and satisfaction with basic services.

H9b. Respondents living in households that experienced conflict before baseline have worse access to and satisfaction with basic services.

H10. Respondents living in households living in (perceived/actual) safer locations than before have improved access to and satisfaction with basic services over time.

H11. Respondents who experience an improvement in access to a basic service are more likely to show an improvement in their general satisfaction with the service.

H12a. Respondents who perceive an improvement in specific aspects of a basic service are more likely to show an improvement in their general satisfaction with the service.

H12b. Respondents who perceive an improvement in the delivery of a social protection/livelihood-assistance transfer are more likely to show an improvement in their general satisfaction with the transfer.

⁸ Essentially, we do not classify reported changes of less than five minutes as 'actual changes', as they may be a result of inconsistent reporting between the two waves. Obviously we are making some assumptions here, but this is an attempt to remove both accidental and trivial change from the analysis.

considered quite substantial (the lowest being just over half an hour).

Access to education (the primary school) has remained static for a greater share of households than access to the health centre, with around a third to half of households reporting no change (see Figure 8). Again, we see a mixed pattern amongst those households that reported change. As is the case for health services, a greater share of respondents reported a longer journey time to the primary school in Nepal and Pakistan. In DRC, Sri Lanka and Uganda, a greater share of households reported shorter journey times and therefore improved access. The average increase/decrease in journey time to a primary school is smaller compared to what we see in access to health centres, with the averages being similar for most countries (Table 1 in Annex 1 replicates Table 10 for the primary school used by the household).





Note: 'No change' includes changes of five minutes or less.





Note: 'No change' includes changes of five minutes or less. For segregated schools we use the average for boys and girls.



Note: In Nepal and Uganda no distinction is made in the survey instrument between piped water to a tap within the dwelling/compound or to a communal tap.

There are considerable differences between each of our country samples as to the main **water** sources used by households. Figure 9 shows the main water sources at the baseline, and illustrates that some areas have well-developed piped water systems that come close to – or sometimes within – the household dwelling (Nepal and Sri Lanka), while within other areas the norm is to collect water from a communal well or tap (Pakistan, Uganda, DRC). Access (again measured by journey time) can change when people switch to a different water source, or when they spend more or less time travelling to the current source.

Access to water has changed less between waves compared to the other two basic services. For three of the countries

(Nepal, Pakistan and Sri Lanka), around half or more of the respondents reported no change in journey time to their water source. The majority of households in Nepal and Sri Lanka already had access to piped water in their house/ compound or very nearby at baseline, so it makes sense that these households report no change. As before, we see a mixed pattern in terms of type of change, with a greater share of households reporting a reduction in their journey time in Sri Lanka and Uganda, and a greater share reporting increases in DRC and Pakistan (see Figure 10). The average change for each country is reported in Table 2 in Annex 1. Reported decreases in journey time are somewhat greater than reported increases for DRC, Sri Lanka and Uganda, average increases/decreases are broadly similar in Nepal and Pakistan.

Figure 10: Changes in journey time to the water source, by household share (%)

Note: 'No change' includes changes of five minutes or less.

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Figure 11: Share of households (%) using the same facility across wave 1 and wave 2

Note: For segregated schools, we use the average for boys and girls. This question was only asked for use of health services in Uganda, and not for schools or water source.

On the whole, then, we see that people are reporting a fair bit of change in terms of their access to basic services. The majority of respondents reported changes in access for health and education, and to a lesser extent for water. However, there are no clear patterns in terms of the *types* of changes reported. We find churning between waves, with some households seeing their access worsen and others seeing it improve. For Sri Lanka, access has consistently improved across all three basic services, potentially due to improvements in transport infrastructure (Sanguhan and Gunasekara, 2017). For Pakistan, access has worsened across all three services: to some extent this can be explained by respondents switching to better quality, but more distant service providers (Shahbaz *et al.*, 2017).

However, we also need to point out the fact that change in journey times does not necessarily mean that people are switching to a different facility. People mostly reported that they were using the same facility or source as in the first wave, although this varies somewhat by country and type of service (see Figure 11). More than 90% of households across the sample reported that they were still using the same health centre in wave 2 as in wave 1; on average, almost 20% reported that they had changed to a different water source. This finding is at odds with the high degree of change measured by the access proxy, therefore the discrepancy could be interpreted as a degree of change in connectivity in terms of road quality or transportation, for example. Of course, it is also possible that the data are affected by a recall issue, whereby some respondents believe the same facility is being used as three years previously, when in fact there has been a change.

Linked to this discussion is respondents' perceptions of who runs the health/education/water facility, and how the (perceived) provider might have changed between waves. In all countries and for all sectors, we see evidence of some switching between government and non-government providers between the two waves, although in nearly all cases the majority of respondents either consistently reported the service not being run by government (i.e. in both waves they stated that the service was run by a non-government provider) or stated that it was run by the government (labelled 'always' in the figures that follow). Overall, a greater share of respondents reported in both waves that the government ran the health service and school, rather than their water service. These findings are illustrated in Figure 12, Figure 13, and Figure 14.

Figure 12: Perceived management of health centre by % household share (government-run vs non-government-run)



Figure 13: Perceived management of school by % household share (government-run vs non-government-run)



Figure 14: Perceived management of water source by % household share (government-run vs non-government-run)



A caveat is necessary here, as there may be some ambiguity as to who is ultimately responsible for providing a service, for instance (e.g. in cases of the government contracting out the service). There is also a problem of attribution in some service sectors, for example, because a provider will make more of an effort to claim responsibility for a good quality service, while denying accountability for a bad quality one. The infrastructure of service provision can also advertise or hide the provider, such is the case in large over-ground water pipes versus thin underground ones (see Batley and McLoughlin, 2015, for more examples). This could explain the churning that we see in perceptions of who provides a service.

Three things emerge from the regression analyses (see Tables 5, 6 and 7 in Annex 2) in terms of which variables appear associated with changes in journey time. First, drawing on the RE regressions, one variable that stands out both in terms of statistical significance and size of the coefficient is location (district) of the respondent, with some locations clearly having worse access to services. This means that within countries there are inequalities in access to basic services (as proxied by journey times) between households living in different locations, which can get worse over time. In turn, this highlights the need for geographically disaggregated analysis.

The second stand-out finding is that there is no direct link between wealth and a reduction in journey time to access basic services. While households that become wealthier according to the Morris score do not show reductions in journeys, those that undertake more profitable livelihood activities (e.g. international migration and own-business in Sri Lanka) are sometimes able to get to facilities quicker. The mechanisms by which they do this are unclear, however; they may be able to afford better transport, or they may have switched to a closer facility, for example.

The third finding is perhaps more surprising. The baseline analysis highlights some limited evidence to suggest that displaced households are closer to services (Mallett *et al.*, 2015). This pattern can be observed to a greater degree in the panel analysis, where the RE analysis for three of the countries (Pakistan, Sri Lanka and Uganda) shows that households that have previously been displaced have shorter journey times to basic services over time. Possible explanations for this include: i) that these households receive support specifically targeted towards displaced households (i.e. in the case of those displaced by the tsunami in Sri Lanka); ii) households have moved to (less remote) places with better service provision; iii) that INGOs/humanitarian activities have been relocated; or iv) that these households are catching up with non-displaced households.

4.3 Tracking quality: changes in satisfaction, problems and participation

Satisfaction

We have considered respondents' experiences with the basic services used, based on responses to perceptions questions. For health and education, experience is measured in terms of overall satisfaction with the service provided on a scale of 1-5, and for water, if the water is perceived to be clean or not. The questions were structured and phrased so that these subjective assessments of satisfaction are based on actual experiences with the (service) provider, rather than general perceptions.

The baseline data show generally high satisfaction with basic services across the five countries (Mallett *et al.*, 2015). The longitudinal analysis continues to build a positive picture (see Figure 15), with more than half of respondents reporting in both waves that they were satisfied with their **health** clinic (Sri Lanka is the exception with 48% of respondents). In all countries aside from in DRC, a greater share of respondents reported greater satisfaction by wave 2 relative to those moving in a negative direction.

In general, satisfaction with **education** services similarly remained high in wave 2, although to a lesser extent than for health services, and in a less clear-cut way. Sri Lanka is the one country where less than half of the respondents reported feeling satisfied with education services in both waves (28%); in fact, a comparatively larger share (40%) reported feeling dissatisfied in both waves. For Sri Lanka and to a lesser degree DRC, a greater share of respondents reported feeling less satisfied by wave 2, than those who reported feeling more satisfied. In the other three countries, respondents reported that they felt more satisfied by wave 2.

Satisfaction with **water** is also high across both waves. More than half of respondents reported feeling satisfied with water services across both waves, and – with the exception of Pakistan – people reported feeling more satisfied by wave 2 (see Table 3 in Annex 1).

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Figure 15: Changes in satisfaction with basic services by % household share

Note: Satisfaction with education is pooled for boys and girls.

Although we generally observe fairly high levels of satisfaction between waves – including some stability in those who have 'maintained' their satisfaction levels – some change has occurred. So, what explains this?

Regression analysis results suggest that many of the hypotheses in Box 3 are either weakly or inconsistently evidenced by the longitudinal data (the regressions are reported in Tables 8, 9 and 10 in Annex 2). Apart from the odd case of statistical significance – e.g. for a particular sector in a particular country – we fail to see strong underlying associations between increased satisfaction with services and: (H7) Accumulation of wealth between waves, as measured by the MSI;⁹ (H8) Higher educational attainment at the household level;¹⁰ (H9b) Past experience of conflict; (H11) A reduction in journey time to the service.

We find slightly stronger evidence of associations in three areas. First, respondents in displacement-affected households (H9a) were found to be less satisfied with health in Pakistan, education in Sri Lanka, and water in Nepal (drawing on the RE regression). That said, the direction of the association is not always uniform, with respondents from such households in Uganda reporting greater satisfaction with both education and water relative to those in non-displaced households.

Second, there is a similar pattern when we consider changes in local safety (H10), with cases of statistical

significance emerging, but in conflicting directions. For example, Pakistani respondents who by wave 2 reported feeling safer going outside of the village, and Sri Lankan respondents who felt safer moving within the village, are more likely to be satisfied with water quality. Nepalese respondents who reported feeling safer moving within the village are more likely to be more satisfied with education. At the same time, Pakistani respondents who reported feeling safer moving either outside or within the village are less likely to be satisfied with health services. One possible explanation for this finding is that respondents' expectations of service providers increases following the establishment of safer conditions. Another possible explanatory factor relates to the decline in post-conflict humanitarian assistance, and subsequent gaps in service provision (Shahbaz et al., 2017).

Finally, we find that some of the strongest underlying associations exist between satisfaction with a service and a series of variables that relate to how that service is run. To some extent, we find that the provider's identity matters: for health services, for example, respondents in Nepal and Uganda who switched to a government-run health centre between waves also became less satisfied with that service. For water, respondents who made the switch to government-run facilities in Uganda and committee-run ones in DRC also became more satisfied, while those who switched to NGO-run facilities in Pakistan became less satisfied.

⁹ The limited significant cases include: greater satisfaction with health in Pakistan and in Sri Lanka; and lower satisfaction with education in Sri Lanka.

¹⁰ Significant cases include: greater satisfaction with health in Nepal and greater satisfaction with education in Sri Lanka. However, if we also consider education level of individual respondents, we find that better educated respondents are less satisfied with education in Pakistan, and less satisfied with water quality in DRC and Pakistan.

But by far the clearest and most consistent results we see relate to respondents' satisfaction with specific characteristics of a service: e.g. waiting times at the health clinic, teacher attendance at the school. For all countries, those satisfied with specific aspects of the health service became more satisfied with the health service overall by wave 2. For DRC, Sri Lanka and Uganda, those more satisfied by wave 2 with specific aspects of how their schools were run were also more satisfied with their schools overall.

Problems experienced

We asked respondents if they had experienced any kind of problem with the basic services, social protection and/ or livelihood assistance in the year prior to each wave. The average number of problems identified by respondents ranged from 0.7 to 1.8 (out of 5) across countries and waves. In four out of five countries, the average number of reported problems either fell or remained the same across waves, the exception being DRC where the average number of problems almost doubled (from 0.9 to 1.7). Figure 16 illustrates these changes.

There is evidence in our data that experiencing a problem with a service in wave 2 (when no problems were experienced in wave 1) is, unsurprisingly, associated with worse satisfaction. In fact, this is the case for every country in relation to water, with the exception of Pakistan. Having to pay a user fee is also associated with worse satisfaction with a service (the exceptions being water and health in Pakistan, and education in Nepal), as is having to queue (again, the exception is water in Pakistan) when such aspects have not been experienced previously.

Participation

Respondents were also asked whether they knew of any grievance mechanism for reporting problems with their basic services, from which we observe some variability across countries. In Pakistan, respondents knew of grievance mechanisms for only very few services in wave 1, and this was not much higher in wave 2. In Sri Lanka – and to a lesser extent in Nepal – we find a substantial jump in knowledge of grievance mechanisms between waves. Figure 17 illustrates these changes in knowledge of grievance mechanisms between waves.

When it comes to knowledge of any kind of meetings about basic services, the lowest average knowledge of meetings was also in Pakistan, with most respondents keeping the same answer between waves. Knowledge of meetings about basic services was highest in DRC and Sri Lanka overall, which also saw the largest increase in knowledge of meetings between waves, as illustrated in Figure 18.



$\label{eq:Figure 16: Change between waves in the number of problems experienced with services, by \% household share$

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Figure 17: Change between waves in the number of grievance mechanisms known about, by % household share



Note: This question was not asked in DRC.

Figure 18: Change between waves in the number of basic-service meetings known about, by % household share



4.4 What explains changes in social protection and livelihoods assistance?

In this final sub-section we look at transfers – including both social protection and livelihoods assistance – focusing first on changes in receipt, and second on satisfaction levels (or perceived impact). In this panel study, social protection and livelihood assistance include different programmes depending on the country context, and refer to state-run programmes as well as those implemented by international donors and humanitarian agencies.¹¹

11 In the case of DRC, for instance, these programmes are humanitarian-assistance not state-funded or state-delivered transfers.

Changes in receipt of or access to transfers

For social protection and livelihood assistance, access is measured in terms of receipt of any one of a given list of transfer received by any household member. The share of households receiving any social protection support by wave has stayed fairly constant, with the exceptions of Sri Lanka and DRC. In Sri Lanka, access has increased by about 20 percentage points due to a roll-out of social protection to the north of the country (Sanguhan and Gunasekara, 2017). DRC has seen a decrease in social protection received, likely due to a drop in humanitarian support in the sampled areas (Ferf et al., 2016). Within the fairly constant share of households receiving social protection, we see quite a bit of churning between waves - while some households no longer receive the transfers that they received previously in wave 1, others started to receive support in wave 2 when they did not receive it in wave 1. Sri Lanka stands out, with a far greater share of households receiving social protection in wave 2 relative to wave 1, which is a result of the expansion of some of the bigger social protection programmes, notably the Samurdhi cash transfer scheme.

On the whole, relatively few households receive support across *both* waves, with most moving 'in and out' of social

protection (see Table 11). Any degree of consistent receipt of social protection is seen most clearly in Nepal and Sri Lanka, where about a quarter of households received social protection across both waves. The equivalent shares for the remaining three countries are markedly lower. With the exception of Sri Lanka, more than half of the sample populations received no support at all (that is, receipt in neither wave). Given that the surveys were conducted in mostly rural, previously conflict-affected areas, with households facing a high number of shocks and stresses (see Section 3), there are questions here about the extent and availability of formal institutional support to these people.

Livelihood assistance includes any kind of programme or transfer that has the objective to support livelihoods, e.g. seeds and tools or agricultural training. The longitudinal pattern for livelihood assistance is not too dissimilar from that of social protection. There is some consistency in terms of the share receiving assistance between waves in DRC, Nepal and Uganda (for the latter this is still incredibly low), while in both Pakistan and Sri Lanka the shifts are more pronounced: a drop of almost 20 percentage points in the former (likely linked to a decrease in NGO/INGO activity (Shahbaz *et al.*, 2017)), and an increase of more than 25 percentage points in the latter (see Table 12). In

	Proportion receiving social protection by wave (%)		Proportion switching into or out of social protection (%)				
	Wave 1	Wave 2	Received it in both waves	Received it in neither wave	Started receiving it between waves	Stopped receiving it between waves	
DRC	29.9	20.0	9.2	59.5	10.6	20.7	
Nepal	38.0	38.6	26.6	50.9	11.7	10.9	
Pakistan	25.3	30.9	16.4	60.9	14.5	8.3	
Sri Lanka	33.0	53.4	25.3	39.2	28.0	7.6	
Uganda	17.0	17.3	4.4	71.3	14.1	10.3	

Table 11: Household access to social protection over time

Table 12: Household access to livelihood assistance over time

	Proportion of households receiving livelihood assistance by wave (%)		Proportion switching into or out of livelihood assistance (%)				
	Wave 1	Wave 2	Received it in both waves	Received it in neither wave	Started receiving it between waves	Stopped receiving it between waves	
DRC	29.9	20.0	9.2	59.5	10.6	20.7	
Nepal	16.3	18.2	5.1	70.0	13.2	11.7	
Pakistan	24.0	5.2	1.4	71.1	4.0	23.5	
Sri Lanka	31.3	56.7	21.3	32.8	35.8	10.1	
Uganda	3.8	5.6	0.7	90.9	5.5	2.9	

terms of the 'switchers', more than a third of households in Sri Lanka began to receive assistance between waves, resulting in 57% of households receiving some kind of livelihood support by wave 2. With the exception of Sri Lanka, the share of households not receiving any support in either wave is high, with 91% of households in Uganda falling into this category (see Table 12). Even though the majority of households sampled in our survey participated in agriculture across both waves and faced a range of shocks (see Section 3.2), it seems that many households receive little long-term livelihood support.

Based on the regressions, we examined what variables appear to be associated with households starting to access transfers between waves (both social protection and livelihood assistance).

First we consider whether demographic characteristics explain changes in access to social protection and livelihood assistance. One might expect that larger households, as well as those with younger or older members on average (and therefore theoretically higher dependency ratios), are more likely to receive these transfers, but the FE findings in Tables 11 and 12 in Annex 2 show that this is mostly not the case. Households that have increased in size or average age between waves are more likely to also receive social protection only in some cases (Nepal and Sri Lanka), while households that have seen an increase in dependency ratio are also more likely to receive social protection in Nepal only. For livelihood assistance, we see a negative coefficient for age for Pakistan and for dependency ratio for DRC, suggesting that these programmes may be targeted at households with a greater number of workingage members. The stand-out result is that there is no such effect for the other countries, suggesting that other factors beyond demographic targeting explain changes in access to these programmes.

In Pakistan and Sri Lanka, experiencing an increase in the *number of shocks* between waves means that households are also more likely to receive livelihood assistance. Households that started experiencing particular *types of shocks* in wave 2 (but not wave 1) are also more likely to receive either social protection (environmental and economic shocks in Nepal) or livelihood assistance (economic shocks in Uganda). In some cases, however, households that started experiencing shocks between waves are less likely to receive a transfer (environmental shocks in DRC; economic shocks in Pakistan). Thus, although it is recognised that one of the primary objectives of social protection is often to help households manage risk and cope with shocks (Holzmann and Jorgensen, 2001), our results show that households that have experienced a shock are not necessarily also more likely to receive social protection.

We additionally find some evidence of an association between attending meetings/consultations about social protection and receipt of transfers, but this is limited to Nepal and Sri Lanka. In Sri Lanka and Uganda, we see that when a household has started to receive social protection between waves, they are more likely to have also started receiving livelihood assistance (and indeed, vice versa). While it is possible that the eligibility criteria for each is similar – and also that access to one programme means that potential beneficiaries become more aware of their rights to another (e.g. through interactions with officials and providers) – our evidence from Sri Lanka suggests that this could be taken more broadly as a possible indicator of political patronage enabling access to state resources (Sanguhan and Gunasekara, 2017).

Finally, the variables that show the strongest association in terms of statistical significance and size of coefficient are district and ethnicity. In fact, social protection and livelihood assistance are often geographically targeted, or targeted towards specific ethnic/caste groups (Slater and Farrington, 2009). For instance, a number of social protection programmes in Nepal specifically target Dalit households, and the RE regression shows that Dalit households are indeed more likely to receive a social protection transfer. In the RE regressions, ethnicity is statistically significant for both types of transfers for the three countries for which it was included (DRC, Nepal, Sri Lanka), and district is significant in almost all cases (the exception being livelihood assistance in Uganda).

Changes in satisfaction (or perceived impact)

Recipients of social protection and livelihood assistance were asked to select from a number of statements on self-assessed impact as to which they agreed with most. For social protection, we see that, in each country, at least one third to almost half of respondents across both waves stated that 'social protection is too small to make a difference' (see Figure 19). The wider literature likewise suggests that the financial value of many social protection transfers in low- and middle-income countries is often extremely low, with the obvious implication that they then have low impact potential (e.g. Hagen-Zanker *et al.*, 2015; Honorati *et al.*, 2015). At the same time, we see that levels of satisfaction with/perceived impact of livelihood assistance tend to be higher, however: with the exception of DRC, around two thirds or more of respondents

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Figure 19: Perceived impact of social protection and livelihood assistance (wave 1 and 2 pooled)



stated that the livelihood assistance that they received 'improves their livelihood'.

For social protection specifically, we also asked recipients about the timing of delivery: as Figure 20 shows, the percentage of recipients who stated that their transfer *always arrived on time* was low in the countries that have the most expansive social protection programmes (Pakistan, Sri Lanka and Nepal). Notably, more than half of the respondents in Nepal and Pakistan had low levels of satisfaction with the transfer, therefore it follows that there may be an association between timeliness of transfer and self-perceived impact. We compared statements of impact over time for those households that received the same social protection or livelihoods assistance transfer in both waves. For social protection we see that, with the exception of Sri Lanka, around half of respondents selected the same statement for both waves (see Table 13). For those that changed their statement, we see a mixed pattern, with greater impacts perceived by more respondents in wave 2 in DRC and Sri Lanka. In Nepal, more respondents reported lower impacts in wave 2, which is also true to a lesser extent for Pakistan. As Sanguhan and Gunasekara (2017) argue, the substantial increase in impact reported in Sri Lanka is potentially associated with more effective delivery of transfers.



Figure 20: Percentage of households receiving their social protection transfer on time, by country (pooled across both waves)

Note: The transfers are for the biggest programme in each country, calculated on the basis of coverage according to our survey data. DRC - food aid; Uganda - old-age pension, Pakistan - Benazir Income Support Programme (BISP); Sri Lanka - Samurdhi; Nepal - stipend for Dalit children/students.

	Social protection				Livelihood assistance			
	Name of programme	No change in impact	Less impact	More impact	Name of programme	No change in impact	More impact	Less impact
DRC	Food aid	56.8	16.2	27.0	Food aid	56.8	16.2	27.0
Nepal	Stipend for girls and Dalit children/ students	50.7	37.6	11.8	Seeds and tools distribution	76.5	11.8	11.8
Pakistan	BISP	46.9	27.4	25.7				
Sri Lanka	Samurdhi	34.4	4.9	60.7	Seeds and tools distribution	68.4	15.8	15.8
Uganda					Seed money for revolving fund	80.7	12.9	6.5

Table 13: Changes in perceived impact of social protection and livelihood assistance between waves

Note: See Figure 20 notes. Empty cells represent insufficient observations to run the analysis.

For livelihoods assistance, more than half of respondents reported no change in the impact of a specific transfer between waves – with as many as 80% reporting this in Uganda. Of those that did report a change, roughly equal shares reported more versus less impact in Nepal and Pakistan, a greater share reported less impact in DRC, and a greater share reported more impact in Uganda. In short, satisfaction with livelihood assistance has mostly stayed the same – and where we do see changes, there is no clear pattern of direction.

In our original research design, we had intended to run regression models in order to identify explanatory factors for changes in the impact of a transfer. However, this has proved impossible in most cases since the number of respondents receiving the same transfer in both waves, but changing their response regarding its impact, was far too low.

4.5 Summary

Our survey data show some fairly large changes in terms of access to and satisfaction with basic services, not all of which we can explain. Regarding access to social protection and livelihood assistance, less has changed.

More than half of the respondents reported **changes in journey times** to the health centre and primary schools between waves, and these changes tend to be fairly substantial – this also holds true for water services, but to a lesser extent. We see churning in access, but no clear patterns in terms of the types of changes reported, with some households reporting worse access and others an improvement.

The notable changes in journey times somewhat contradict the fact that around nine in ten respondents stated that they were using the same services as in wave 1. This discrepancy could, however, be explained by improvements or deterioration in aspects such as road quality or transportation. Indeed, there is evidence of this for Sri Lanka, where road quality has improved substantially during the study period, but we need additional data on transport infrastructure and geographically disaggregated data to verify this hypothesis. Of course, it is also possible that the data is affected by a recall issue.

The regression analysis reiterates the geographical dimension of access, with the respondant's location one of the strongest predictors of better or worse access to basic services. There is, however, no strong association between changes in wealth and changes in access.

Our data reveal some patterns concerning changes in access to basic services of previously displaced households. In three of the countries (Pakistan, Sri Lanka and Uganda), households that had previously been displaced, also had shorter journey times to basic services over time. Explanations for this include: these households received support specifically targeted towards displaced households, they have moved to places with better service provision, or they are catching up with non-displaced households. Coming to **satisfaction with basic services**, the longitudinal analysis affirms the positive picture painted at the baseline. On the whole, satisfaction with services was high across both waves, and where people's perceptions changed between waves they mostly became more positive (with some exceptions). This is seen most strongly for satisfaction with health and water services. Furthermore, in four out of five countries, the average number of problems with services experienced by the respondent either fell or remained the same across waves.

These high levels of satisfaction are somewhat surprising, given that services in post-conflict settings are generally patchy and of low quality. So why are respondents so satisfied, and on the whole becoming more positive about the services being provided? At the baseline we hypothesise that satisfaction could be high when people have low expectations and lack of experience using the services in question (Mallett *et al.*, 2015). Furthermore, we suggest that even if fairly poor services are being provided, they may be better than the services accessed previously.

We still cannot fully test the hypotheses set out in Box 3, but our analysis shows that people's overall satisfaction with a service correlates with a series of variables related to how that service is run - in other words, the experience of using the service determines overall satisfaction. To some extent, we find that the identity of the provider matters: for health services, for example, respondents in Nepal and Uganda who switched to a government-run health centre also became less satisfied with that service by wave 2. There is also evidence from a number of countries that experiencing a problem with a service in wave 2 (when no problems were experienced in wave 1) is, unsurprisingly, linked to worse satisfaction. The clearest and most consistent results concern respondents' satisfaction with specific characteristics of a service, however (e.g. waiting times at the health clinic and teacher attendance at the school). For all countries, those who became satisfied with specific aspects of the health service also became more satisfied with the health service overall.

In terms of **transfers**, the share of households that received any social protection support by wave has stayed

fairly constant, with two exceptions: Sri Lanka and DRC. In the first case, there has been a rollout of social protection within the country, and in the second case a drop in humanitarian aid, both of which offer partial explanations for this finding. We see a fair amount of churning within those households receiving social protection – while some households stopped accessing it by wave 2, others started receiving support for the first time. Changes in access to transfers seem to be mostly associated with geographical location and ethnicity/caste of the household, which are used as targeting criteria in many contexts.

Our key finding is that few households received support across *both* waves, however, with most moving 'in and out' of social protection. Furthermore, those households that did not receive a transfer are mostly not satisfied with its impact. In each country, at least one third to about half of respondents across both waves stated that 'social protection is too small to make a difference'. This is potentially associated with timeliness of the transfer (with many respondents stating that the transfer is often delivered late), but could also relate to low transfer values, as both are known to reduce transfers' impact potential.

The majority of households did not receive livelihood support in either wave, with most of the remaining households churning in and out of participation. Even though the majority of households sampled in our survey practice agriculture across both waves and face a range of shocks (see Section 3), it seems that most receive little long-term livelihood support. At the same time, however, we see that levels of satisfaction with livelihood assistance tend to be higher than for social protection, with around two thirds or more of respondents in all countries stating that the livelihood'.

Thus, although the receipt of livelihood assistance is generally perceived to be quite useful, for the most part this evidence suggests that there is relatively little in the way of consistent and long-term support available to households in these populations. Self-perceived impacts of social protection additionally suggest that, even where transfers are accessed, they are often insufficient to make much of a difference to household livelihoods.



Despite the relatively brief interval between waves, the data show that people's perceptions of government - employed here as a partial, indirect measure of legitimacy - are often quite dynamic. While the perceptions of some populations remain static, a substantial share changed their views of local and central government between waves. Of these, a greater proportion became more positive than those who became more negative. So, what accounts for these positive shifts? Analysis suggests that, more than anything else, perceptions are influenced by things that do not change over time: geography, caste and ethnicity are all relevant here. Beyond this, we find relatively strong evidence that particular aspects of service delivery are associated with changes in perception, including the number of problems experienced, access to grievance mechanisms, and opportunities for participation. The potential for service delivery to affect beliefs about authority thus appears to hinge on complex demographic factors as well as access to and satisfaction with services, as represented by the infographic below.

Is better service delivery linked to more positive perceptions of government?



Just as war is often framed as 'development in reverse' – destroying economies and collapsing people's livelihoods – so too is it held responsible for unravelling state-society relations ('state formation in reverse', as it were). Although Tilly's classic work into European state-making suggests a pivotal role for violent conflict in establishing social contracts, it is recognised that this kind of relationship is time- and place-specific (Tilly, 1985, discussed in Leander, 2004). Connected to this is the idea that signing peace agreements kick-starts a process of rebuilding not just economies but states too; and for re-establishing legitimacy, as citizens increasingly come to 'accept' the authority and rightfulness of formal state institutions.

In the orthodox take on war-to-peace transitions, recovery and development are understood to start from the moment that conflict comes to an end, and to continue upwards in a linear trajectory. It is also expected that all good things move together in the same positive direction: economic growth, individual and household wellbeing, social cohesion, security, public goods provision – and state legitimacy. The present survey was designed to track changes in several of these variables over time, and, using the longitudinal analysis, to examine whether there are indeed any underlying associations between them.

The cross-country evidence raises some questions as to whether all good things move together, and highlights variability in the direction and degree of attitudinal change towards government as societies move further through their 'post-conflict periods'. In this section, we first elaborate on the conceptual framing of legitimacy, then trace what has happened in our survey to people's perceptions of government over time, before drawing on regression analyses to identify what factors, if any, are associated with either declines or improvements in attitude.

5.1 Analytical framework for perceptions of government

This sub-section gives an overview of the analytical framework used in analysing people's perceptions of government. The baseline synthesis paper (Mallett *et al.*, 2015) provides more in-depth justification for our choice of indicators and hypotheses.

The relevance of legitimacy to both the creation and preservation of order has long been recognised by political scientists, having been described variously as 'the core of political organization' (Alagappa, 1995: 3), the 'central issue in social and political theory' (Beetham, 1991: 41), and as 'central to virtually all of political science' (Gilley, 2006: 499). The state-building policy agenda, with its original interest in hardware and capacity, has taken rather longer to accept this slippery concept (Teskey et al., 2012). But the circumstances are quite different from, say, ten years ago: legitimacy, as well as capacity, have become fundamental aspects of what donors and aid agencies seek to target in their attempts to help build more peaceful, responsive and embedded states. Investing in better service delivery is one of the main ways that they attempt to enhance legitimacy, and a core objective of this panel survey is to examine whether (and under what conditions) there might be any credibility to this strategy.

Although there are differences in the approaches taken, it is generally agreed that, in its broadest sense, legitimacy refers to the social rightfulness of a given actor - in this case, the state. By 'social rightfulness' we mean the extent to which a particular group of people in a particular territory i) believes the state has the right to rule, and ii) acts accordingly, through different modes of behavioural compliance. These are what Levi et al. (2009) refer to as the 'value-based' and 'behavioural components' of legitimacy, as shown in Figure 21. In their model, these are not just dimensions of legitimacy - although it might be useful to think of them as the first 'sub-layer' of legitimacy, if we start to break the concept down - but parts of a causal chain. In Levi et al.'s view, it is the 'sense of obligation or willingness to obey authorities [...] that then translates into actual compliance' (ibid.: 354, emphasis added). In other words, before someone starts paying taxes willingly or deferring to a police order, they must first, as a necessary condition, believe in the rightfulness of the enforcing/regulatory institution or simply comply based on fear of negative consequences that the enforcing institution could impose (Brinkerhoff et al., 2012). This logic supports the idea that legitimacy makes it cheaper and easier for states to govern, as it reduces the need to secure compliance through the resource-intensive application of force (Levi et al., 2009). It also relates to the idea that legitimacy creates 'a kind of elasticity in state-society relations' (Mcloughlin, 2015b: 2), whereby beliefs in the rightfulness of the state help maintain social compliance even when things go bad (e.g. in times of financial crisis).

Given the comparative advantage of surveys in generating perception data, the SLRC survey focuses

on the value-based component of legitimacy rather than the behavioural component.¹² In their model, Levi *et al.* (2009) argue that value-based legitimacy has two 'antecedent conditions'. Firstly, there is trustworthiness, which reflects the judgement that 'authorities are motivated to deliver on their promises and do what is right for the people they serve, seeking policies that truly benefit their societies' (ibid.: 356). In turn, the authors suggest that trustworthiness comprises three more elements, against which personal judgements or assessments can be made. These include:

- leadership motivations, which are tied to the nature of commitments made by leaders as well as their individual charisma (to an extent this means a 'thin' form of legitimacy might be generated by the ability of a president, for example, to convince the public of their vision).
- performance, which refers to the capacity of the state to produce core functions (this is how service delivery tends to get framed as a mechanism of trust-building, and therefore legitimisation).
- administrative competence, which is about both the honesty of state agents (e.g. perceptions of corruption) and the state's capacity to enforce the types of policies/regulations it has committed to (e.g. de jure law).

Secondly, there is procedural justice, which emerges when 'governments exercise their authority through procedures that people perceive as fair' (ibid.: 359). Evidence has been found in multiple settings – most recently (and of particular relevance to us) in postconflict Nepal (Fisk and Cherney, 2017) – that beliefs in procedural justice contain a *legitimating quality* (Tyler, 2006). These potential pathways are illustrated in Figure 21.

At this disaggregated level, it then becomes possible to formulate questions for a survey instrument, from which the responses can plausibly tell us something about state legitimacy. The SLRC survey uses two particular questions to capture aspects of value-based legitimacy:

- To what extent do you feel the decisions of those in power in (local and central) government reflect your priorities?
- Do you agree that the (local and central) government cares about your opinion?

Of course, these questions cannot be taken as direct indicators of state legitimacy, underpinned as they are by a series of assumptions. To start with, the government is taken as the primary political unit (with the exception of DRC where respondents were asked about a wider range of governance actors).¹³ It has long been acknowledged that the state is about more than just formal government. This is particularly the case in conflict-affected contexts, where government tends to be contested, hybrid, layered and networked (Boege et al., 2009; Leonard, 2013). We recognise this as a limitation, but at the same time point out that governments are rarely an irrelevance; while they may not be the only form of authority, they remain one of the most important. Indeed, scholars continue to argue that the best hopes of improved security and development hinge on the construction of capable states. As such, one assumption underpinning our model is that beliefs about the government translate into beliefs about the state in a broader sense.

Figure 21: Pathways to legitimacy



Source: Adapted from Levi et al. (2009).

¹² Although the survey generates information on certain measures that could be taken as indicators of behavioural legitimacy, such as civic participation, these are never included in the regression models as dependent variables.

¹³ Readers of the DRC wave-2 country report (Ferf et al., 2016) will note that, in the regression results presented there, a significant association is found between satisfaction with a service and perceptions of government. This is because different analytical models were used with indexes of perceptions of government (non-state, local, and central) as outcome variables. Once other aspects of perceptions of the state's legitimacy are introduced into the model, other service delivery variables show up as predictors of perceptions. Given that we did not have such extensive perceptions data in all country samples, the comparative analysis presented in this synthesis report relies only on the two indicators of perceptions of government outlined previously.

It is also the case that we are exploring a particular line of legitimisation, based on the nature of the questions asked. That is, we are not looking at behavioural legitimacy, but that which is value-based (i.e. a precondition of the former). And again, within that are focusing on certain strands. While the interpretation of our survey questions is open to debate, we see them as constituting indicators of trustworthiness: that is, the belief that the government's actions are serving individual interests. In our view, this captures two aspects of Levi et al.'s (2009) indicators of trustworthiness - leadership motivation and performance - meaning that it is somewhat difficult to disentangle the specific mechanisms at play. Our approach stops short of assessing the underlying rightfulness of government actions, which Mcloughlin (2015) sees as the most direct way of examining legitimacy. For example, just because an individual feels the government's decisions reflect their own priorities, it does not automatically follow that the same individual believes its actions are morally justifiable in a wider sense (partly for the simple reason that not everyone can be characterised as a self-interested rational actor). To investigate these issues would be to carry out a more detailed inquiry of the norms and expectations held by an individual, and the extent to which government action squares (or not) with these.

Thus, we are not claiming that the perception responses in relation to our questions are perfect measures of state legitimacy, but there is sufficient plausibility contained within the literature to suggest they may form steps of a longer pathway.

We explore changes in perceptions of government at national and local levels (the precise tier of government varies by country). We then examine whether changes in the following factors may be associated with changes in people's perceptions of government:

- Individual and household factors (as in Section 3.1)
- Contextual factors (as in Section 3.1)
- Shock factors (as in Section 3.1)
- Service access and quality factors (as in Section 4.1)
- Service implementation and performance features (as in Section 4.1).

Our analysis thus seeks to test the hypotheses outlined in Box 4.

Box 4: Hypotheses about changing perceptions of government

H13. Changes in perceptions of government are influenced by social identities of the respondent, such as gender, ethnicity and religion, and education level.

H14. Respondents who live in households that become wealthier over time have improved perceptions of government.

H15a Respondents living in households that have recently (in the last three years) experienced conflict have worsening perceptions of government over time.

H15b Respondents living in (perceived/actual) less safe locations than before have worsening perceptions of government over time.

H15c Respondents living in households that have recently (in the last three years) experienced more shocks and crimes have worsening perceptions of government over time.

H16. When a household starts using a government-run basic service, respondent's perceptions of government also improve.

H17. When a household's access to a service improves, the respondent's perceptions of government also improve.

H18. When a respondent reports an improvement in their experience of accessing basic services, social protection or livelihood assistance, their perceptions of government improve over time.

H19a. An increase in the respondent's knowledge/use of grievance mechanisms for basic services is linked to improved perceptions of government over time.

H19b. An increase in the respondent's level of civic participation is linked to improved perceptions of government over time.

5.2 Trust and confidence in government

There is considerable variation across the five countries in approval ratings of local and central government. The highest percentage of respondents who agreed with the statement (local/central) government cares about my opinion' is found in Sri Lanka (around 60% overall), followed by Nepal and Uganda (see Table 14). Pakistan consistently shows the lowest percentage of respondents agreeing that either tier of government cared about their opinion or that its decisions reflect their priorities (the second indicator used here). There were some notable changes between waves in perceptions of government in terms of sample averages. For example, the overall perception of central government stayed the same between waves in Nepal, while the approval rating of local government rose substantially by wave 2. More strikingly, the percentage of respondents with a positive perception of local and central government in Pakistan increased from one in twenty people in wave 1 to around one in four in wave 2.

Despite these sometimes substantial changes in overall levels of government approval, in each country a relatively large proportion of the sample never (that is in neither wave) had a positive perception of government. This is most pronounced in Pakistan, where around 70% of the sample never agreed that the local or central government

Table 14: Average perceptions of local and centralgovernment, by country and wave

	% respond agree th governm about the	dents who nat <u>local</u> ent cares ir opinion	% respondents who agree that <u>central</u> government cares about their opinion		
Country	Wave 1	Wave 2	Wave 1	Wave 2	
DRC	22.2	29.8	16.3	10.1	
Nepal	33.8	44.2	21.2	22.0	
Pakistan	5.6	27.9	4.0	21.5	
Sri Lanka	60.3	57.9	44.0	65.3	
Uganda	41.1	46.4	36.2	45.0	

Note: In DRC, this question had five response options ranging from 'never' to 'always', whereas the response categories were limited to 'yes' or 'no' in the other countries. Accordingly, this question has been recoded in the DRC data so that the responses 'only in some areas', 'most of the time' and 'always' are coded as 'yes'.

cared about their opinion, and around 60% never agreed that the decisions of either tier of government reflected their priorities. The charts in Figure 22 and Figure 23 show that the proportion of respondents stating that the government 'ever' reflects their priorities in both waves is relatively low in all countries, indicating that in all countries there was a lot of switching in and out of the 'never' category. Thus, we find that respondents' confidence in government is low overall and apt to change over the course of three years.



Figure 22: Non-changers of opinion about local government

Note: In the case of 'government reflects my priorities' for Sri Lanka, 'always yes' includes those who responded 'completely/to a large extent' in both waves and 'always no' includes those who responded 'sometimes/rarely' or 'never' in both waves. This recoding is due to there being hardly any observations in the 'never' category.

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Central government cares Central government decisions about my opinion ever reflect my priorities 80 70 60 50 40 30 20 10 0 DRC Nepal Pakistan Sri Lanka Uganda DRC Nepal Pakistan Sri Lanka Uganda Always no Always yes

Figure 23: Non-changers of opinion about central government

Note: See Figure 22 notes.

It is worth noting that perceptions of central government are more negative than those of local government in all countries and panel waves, with the notable exception of Sri Lanka in wave 2. In this case, the percentage of respondents who agreed that the government cares about their opinion jumped from 44% to 65% for central government, but fell from 60% to 58% for local government in the same time period. This result may be associated with the presidential election in 2015, in which Maithripala Sirisena ousted the incumbent President Mahinda Rajapaksa. Sirisena is seen as an ally of Tamil and Muslim communities, which means a real shift in Sri Lankan politics.

5.3 What explains changes in perceptions of government?

To identify variables which are associated with changes in perceptions of government, we ran regressions in each country at the local and central government levels and for the two outcome variables described above: 'Government cares/is concerned about my opinion' and 'The decisions of government reflect my priorities'. The first of these variables is binary (yes/no) in the survey, so, for our purposes, a 'yes' response is interpreted as a positive perception of government. The second indicator is categorical, with five possible responses ranging from 'never' to 'completely' and has been re-coded into two categories: 'never' and 'ever'.¹⁴ For this variable, it cannot be said that the government's decisions 'ever' reflecting a respondent's priorities constitutes a 'positive' opinion. We can, however, say that a switch out of the 'never' category indicates a *more* positive opinion than previously, even if it is only a minimal acknowledgement of the government's responsiveness.

Using the regression results we identify several clusters of variables that can be said to share an underlying association with changes in people's perceptions (in a statistically significant way). As a general rule, only statistically significant results are described in this section unless otherwise specified. The regression results can be found in Tables 13 to 16 in Annex 2.

Economic conditions

While there is some inconsistency, as well as several cases of non-significance, we see a handful of results to suggest that perceptions of government are linked to changing economic status.

There is some evidence from Sri Lanka that **household wealth matters**. Here, an increase in the Morris Score over time is associated with an increase in the likelihood that the respondents think the *local* government cares about their opinion and that the local government's decisions reflect their priorities. This is not the case for



perceptions of central government, however, and we fail to see the same pattern in any of the other countries.

In some contexts, we find significant results for the **experience of an economic shock** between waves. However, the direction of this relationship is inconsistent. Specifically, experiencing an economic shock for the first time in wave 2 is associated with a worsening perception of local and central government in Pakistan (3 out of 4 regressions) and to a lesser extent in Uganda (2 out of 4 regressions). In Nepal, experiencing an economic shock is linked to an improvement in perception of local government on both indicators, although notably not for central government. This may be a case of local government paying attention to a problem, even if it cannot help.

So, there is limited evidence here that, **under certain circumstances**, **people tend to rate government performance more highly when economic conditions are in their favour**. Subsequently, there is partial, although inconsistent, support for Hypothesis H14, which states that respondents in households becoming wealthier will have improved perceptions of government. This suggests more broadly that economic wellbeing is not an automatic predictor of attitudes towards government, which squares with Li *et al.*'s (2015: 97) assessment of the relationship between economic status and perception of government performance as 'intricate and controversial'.

As we discussed in Section 3, there do not appear to be strong links between improvements in local safety (as perceived by the respondent) and changes in household wealth. Neither do we find any such relationship here: **perceptions of safety are not significantly associated with government** perceptions in any country, except for central government in Uganda. There is thus little evidence in support of Hypothesis H15b 'Respondents living in (perceived/actual) less safe locations than before have worsening perceptions of government over time'.

Finally, we also consider the role that migration, as one aspect of economic activity, plays in shaping perceptions. While cases of **both international and internal migration show some significant associations with perceptions of government, the direction of the relationship is mixed.** For example, having a household member migrate between waves is significant in both Uganda and Sri Lanka. But the association runs in opposing directions, with respondents in Uganda becoming more positive towards the government, while respondents in Sri Lanka become more negative. There is also little evidence of a strong association when we consider displacement status, aside from a notable example in DRC where respondents *currently displaced* at baseline were *less likely* to also agree that the *central government's* decisions reflected their priorities. In Uganda we find the opposite situation, where *formerly displaced* respondents were also *more likely* to agree that the *local government's* decisions reflected their priorities. These results may relate to the absence of government or humanitarian programming for the displaced in South Kivu, DRC compared with focused efforts that have been made in northern Uganda to reverse the social exclusion of households affected by the conflict between the LRA and the Government of Uganda.

Service delivery

For some years now, a core pillar of the state-building policy agenda has rested on the assumption that a link exists between service delivery and perceptions of government, and that this link is both positive and causal. In short, this means that improvements in service delivery are framed as instrumental to the creation of legitimacy. Since the SLRC's inception in 2011, several contributions to the literature have concluded that service delivery and state legitimacy appear to be linked, however in ways more complicated and nonlinear than often assumed (Brinkerhoff *et al.*, 2012; Fisk and Cherney, 2017; Mcloughlin, 2015a; 2015b; Sacks and Larizza, 2012; Stel and Abate, 2014; Stel and Ndayiragije, 2014).

This conclusion also comes through in our baseline survey study (Mallett *et al.*, 2015), which finds evidence of a relationship between service delivery and perceptions of government in wave 1, but along certain lines. In particular, the authors observe consistent significance in often positive perceptions of government and people's participation in meetings about service provision, as well as their knowledge of grievance mechanisms. At the same time, they find very little evidence to suggest a similar relationship with access (journey times for basic services).

For the present longitudinal survey, we find evidence of an association between service delivery and state legitimacy, with a cluster of service delivery variables that relate to perceptions of government. In other words, **certain aspects of service delivery appear to matter in people's perceptions of government**, both in a static and dynamic sense.

As in the baseline study (ibid.), we find very little evidence in wave 2 of a relationship between access to services and perceptions of government. Distance to the health centre or water source is either non-significant in all cases or has a negligible effect. This suggests that, on the whole, improving the time that it takes to reach a service is not a deciding factor in people's perception of government. Starting to pay official fees for a health centre, on the other hand, is associated with worsening opinions in Pakistan (local and central government) and Nepal (central only). Starting to pay official fees for water is also associated with worsening opinions of local government in Sri Lanka, and improved perception of central government in Uganda. These results suggest that, for the most part, the affordability of basic services may be a greater priority for people in these contexts relative to journey times, and is something that can potentially influence their perceptions of government.

On the whole, there is no association between changes in **who runs the health centre** and changes in perceptions of government. The exception is in DRC, where a switch in wave 2 to perceiving that the government runs the health centre is associated with a worsening perception of central government.

Where the government is perceived to have become the water service provider between waves, there are quite a few significant associations with (mostly more positive) changes in government perception. For example, where the government is seen to have taken over running the water source in Nepal, respondents are also more likely to agree that the local and central governments care about their opinion and that the central government reflects their priorities. In this case, it may also be that government initiatives in this sector - such as the Local Governance and Community Development Programme (LGCDP) – have had particular success in making decision-making processes more inclusive (or have at least given the appearance of inclusivity or improved service delivery), which is reflected in improved government perceptions (Acharya et al., 2016). In DRC and Uganda we also see this association for both indicators of perceptions of central government.

There is sparse evidence of a positive association between **satisfaction with services** and perceptions of government. Becoming satisfied with the **health** service between waves is associated with improved perceptions of government in one or two countries for three of the four sets of regressions.¹⁵ These are not, however, the same countries each time, which suggests that if respondents do indeed hold government accountable for the quality of their health service, they have specific government actors or levels of government in mind. The strongest evidence comes from Uganda, where there is a positive association in three out of four regressions (the exception is for 'central government reflects my priorities'). In Pakistan, we only find an association for 'the local government cares about my opinions', and in Sri Lanka for 'the local government reflects my priorities'. On balance, then, with the scarcity of evidence noted, accountability for the health service seems to be associated more with local government than central government in these contexts.

Notably, there are no significant results associating perceived **water quality** to perceptions of government, which is somewhat surprising given that the perceived provider of the water source and its affordability are relatively consistent explanatory factors here.

One of the strongest sets of results comes from the cluster of civic participation and accountability variables, namely, problems reported with services, knowledge of grievance mechanisms and community meetings, and having been consulted about services. In every set of regressions, this cluster of variables is significant, with consistency across countries in the significance and direction of the relationship. Those who experienced more problems with basic services between waves also lowered their perception of government in three out of five countries (Nepal and Uganda for local government only, Pakistan for both tiers of government). Those who knew of more grievance mechanisms by wave 2 also reported an improvement in their perceptions of government in three countries (for both tiers of government in Nepal and Sri Lanka, and local government only in Uganda). In Nepal and Uganda, knowledge of more meetings by wave 2 is also associated with an improvement in perceptions of local government (and in one case central government). Greater consultation about basic services is associated with an improvement in perceptions of local and central government in Sri Lanka only.

Notably, we find no significant associations between **receiving livelihood assistance** and perceptions of government, although there are a few extremely mixed examples of when starting to receive social protection

¹⁵ More questions were asked about more tiers of government in DRC, therefore we have been able to construct indexes of perceptions of government in this country. Using the indexes as outcome variables, there are several instances where satisfaction with services shows a significant association with more positive perceptions of government. The full results can be found in Ferf *et al.* (2016).

between waves has a significant association with changing government perceptions. It is particularly surprising that receipt of social protection is not associated with any change in perceptions of government in Sri Lanka, where there has been extensive roll-out of the Samurdhi programme between waves. There is a certain line of thinking that such transfers can play an instrumental role in state legitimisation. In a basic sense, establishing social welfare or assistance systems is often thought to reflect the intentions, principles and norms of the formal state. Where access to transfers is universal, this signals that the government aims for distributive equality (Silva et al., 2016). Where it is targeted towards specific groups, such as those with a history of social, economic and political marginalisation, it is understood to be more about distributive justice or fairness.

While there may be some logic to this theory, our survey evidence does not suggest an association. A closer look at the nature of social protection transfers potentially suggests why, as in many cases the size of the transfer is small and many respondents reported that they were of limited use as a result. The longitudinal data additionally show that transfers tend to be one-off payments, rather than sustained support over time. Qualitative evidence from Nepal further shows that challenges and frustrations associated with obtaining the transfer in practice - linked in turn to difficult geography and bureaucracy - affects the way that people think about the intervention's usefulness (KC et al., 2014). It is therefore possible that the material use of such forms of assistance essentially undermines any symbolic value that beneficiaries may attach to the transfer.

Time-invariant factors

Drawing on the RE model, we can test the relationship between variables that do not change over time and perceptions of government across both waves. This includes gender of respondent, age and education level at baseline, location at baseline, and history of displacement. In our data, these time-invariant factors often show a highly significant association with perceptions of government, which indicates that despite the effect that socioeconomic changes between waves may have on perceptions over a three-year period, an individual's core characteristics lie at the heart of how they rate the government in any given wave.

Firstly, we find several instances where **gender** is important, whereby female respondents have worse perceptions of government than their male counterparts, even when controlling for a host of other socioeconomic factors. In Pakistan, female respondents are less likely than men to think that local or central government cares about their opinion or that the decisions of local government reflect their priorities. This is hardly surprising, given the exclusion of women from political life in this country. In Uganda and Nepal, female respondents also have less positive perceptions of the central government, although notably they do not differ from men in their rating of local government. In Sri Lanka, female respondents are more likely than men to agree that the local government cared about their opinions.

The respondent's level of **education at baseline** is occasionally a significant predictor of their perception of government, however, not as often as we expected. The strongest association is in Nepal, where respondents who are literate also have more positive perceptions of local government than those with no education or who are illiterate. We also see an association in Sri Lanka, where being literate is associated with better perceptions of local and central government. However, in both cases, there is no significant association for higher levels of education, which indicates that it is only the ability to read and write that is associated with a respondent feeling that the government represents them.

The strongest time-invariant predictors of perception of government are ethnicity and location at baseline. Ethnicity is significant at least once in every set of regressions, while location at baseline is significant in 4 or 5 times out of each set of 5. This association between ethnicity and the perception that the government is representative and responsive is country-specific, with a few notable examples. In Sri Lanka, Tamil respondents are the most positive about local government, while Sinhalese respondents are the most positive about central government. This is not surprising in terms of the pattern of perceptions, but it is somewhat unexpected that these differences endure even when controlling for factors such as location, relative wealth and the type of occupations that household members perform - all of which can be determined by ethnic background. This suggests that economic transition following the end of conflict is not enough in its own right to establish the state's 'legitimacy' (as defined in our terms) in areas that were previously under the control of anti-establishment forces. In the case of Sri Lanka, the civil war ended in defeat for the Tamil insurgents, and although subsequent governments have implemented reconciliation policies to a limited extent, the rebuilding of the Sri Lankan economy has been a centralised project extending from

Colombo into the north and east. Despite rises in living standards and wealth at the regional level, there is some suggestion here that 'Sinhala triumphalism' has left a bitter taste (Byrne and Klem, 2015).

In Nepal, we see that respondents from Janajati and Dalit ethnic groups are more positive about central government, and to an extent about local government. Meanwhile, respondents from Bardiya have more negative perceptions about both levels of government. The regression results are mostly accounted for by the ethnic groups' wave 1 position, and obscure some substantial changes over time. In fact, we see a rise across all ethnic groups in the percentage perceiving that the central government's decisions reflect their priorities, although this is largest among the Madhesi. However, we see a decline in the proportion of Brahmin and Janajati respondents perceiving that the government cares about their opinion, and an increase in the other historically more marginalised groups. These changes may be linked to the passing of the Constitution in September 2015, and strongly suggest that, despite violent anti-Constitution protests by Madhesi political parties, many of the respondents in our survey welcomed the Constitution's message of social inclusion and the Constituent Assembly's ability to finally reach consensus after years of political stalemate (Sturge et al., 2017).

In Uganda, we find that respondents from the Lango sub-region (also of the Lango ethnicity) are consistently less positive about local government by wave 2 than those from Acholiland. This is potentially a reflection of the geographical unevenness of recovery efforts and investments in the country, skewed as they have been towards the Acholi sub-region (Marshak *et al.*, 2017). Yet Lango respondents are more positive about central government.

In Pakistan, we find that respondents from Swat district, as opposed to Lower Dir, are consistently more positive about local and central government by wave 2. This finding relates to the fact that both the state and donors have been much more present in Swat than Lower Dir (the state through increased army presence), and that Swat has experienced a more concentrated recovery effort than Dir (Shahbaz *et al.*, 2017). In DRC, respondents from Nyangezi region are found to be the most positive about local and central government, which may relate to the fact that this region has been the most stable during the survey (Ferf *et al.*, 2016).

5.4 Summary

We do not expect people's views of government to be driven by exactly the same things in each context. Indeed, as the results outlined in this section show, it is rare that we find strongly significant variables across all five sets of country regressions. Despite this, there are a number of themes arising from the analysis that are relevant to our original hypotheses.

First, there are several areas where we might assume to see associations but either do not or see only very weak links. For example, we unexpectedly found no association between perceptions of local safety and exposure to conflict (see hypothesis H15 in Box 4). We expected education to be a determinant of perceptions of government, since government policies have different impacts on low- and highly-skilled segments of a workforce, but find little evidence to support this (H13). Some isolated associations emerge between household wealth (H14) and also receipt of assistance (part of H18) and perceptions of government, however we do not observe the overall trend that we had anticipated.

Second, we find that some of the strongest underlying associations with people's perceptions of government relate to things that do not change. Ethnicity and geography are consistently strong variables across the regression analyses (parts of H13), suggesting there are both identity-based and territorial aspects to legitimacy. This is important because it raises the question as to whether the government is only considered legitimate by specific groups and categories of people. Aggregate measures of people's perceptions (and other proxies of legitimacy) can mask inter-group variation, therefore the very fact that such variation exists in the first place demonstrates that legitimisation is neither an even nor linear process. It also hints at the politics involved in legitimisation strategies (see Mcloughlin, 2015b).

Third, although the analysis does not support the idea that improvements in service delivery necessarily or automatically generate more positive perceptions of government, it does show that relationships exist. In other words, under certain circumstances and conditions, it appears possible that *particular aspects* of public services can shape the way in which people think about government. We find some evidence that opportunities for participation (knowing about and attending consultations) (H19b) and the presence of accountability spaces (like grievance mechanisms) (H719) are associated with better perceptions. Access, as measured by journey times, however, is not a predictor of perceptions of government (H17). These results continue to build the case, initially developed in the baseline synthesis (Mallett *et al.*, 2015: 48), that the 'legitimating quality' of services potentially lies in the exchanges, interactions and relationships that occur through the process of provision.

Fourth, despite the above, we also find that the association between service delivery and state legitimacy may not always be positive. Our relatively strong and consistent finding about the role of any kind of problem with basic services in shaping views of government tells us a number of things. At the most basic level, it shows that people care about the services they are getting, and that problematic service delivery potentially affects not just people's relationships with and attitudes towards local-level providers - whoever they might be - but also attitudes towards the government itself. Closely related to this is the idea that what really matters is quality. The fact that problems with services seem to share a stronger underlying association with perceptions relative to several other aspects of service delivery – from access (H17), to provider identity (H16), to subjective satisfaction (H18) - suggests that a bad experience in the past can affect relationships months or years down the line. Research from Sierra Leone augments this picture: qualitative SLRC work by Denney and Mallett (2015: 24) shows how 'problems in the more tangible dimensions of treatment, such as drug stock-outs or unauthorised charging of informal fees for treatments that should be free' can 'act as deterrents against future uptake of formal health services'. This is particularly so when combined with negative attitudes from clinic staff. The implication for policy is that, from a state-building perspective, scaling up access - for example, enrolling more children in school, bringing health facilities physically closer to communities – is only one part of what needs to be carried out. There also needs to be a stronger emphasis on quality, not only in terms of its possible legitimating effect, but also as a route towards better development outcomes more broadly (Pritchett, 2013).

Generally speaking, these results highlight the **multidirectional role that service delivery can play in relation to state-building**. The state-building policy agenda tends to set up service delivery as a mechanism of legitimisation, where it is assumed that, given the right investments and attention, service delivery can play a positive role in building state legitimacy. But what our analysis suggests, is that the opposite can also be true: 'bad' service delivery can undermine people's perceptions of government – and potentially have a delegitimising effect under certain circumstances. There are complex dynamics at play here, and it is not clear how strongly the dual processes of legitimisation and delegitimisation are associated here. Are they two sides of a coin, or altogether quite different?¹⁶

Finally, there are also questions about the speed of legitimisation and de-legitimisation, with SLRC evidence from DRC and Sierra Leone suggesting that while trust in government can be lost quite rapidly, it takes far longer to rebuild. To explore this further, we need the kind of historical and political approach to analysing service delivery that Mcloughlin (2015a) promotes, which can help us understand what happens when expectations are set, raised and then unmet. Indeed, there is evidence that service delivery reforms can actually create violent conflict when the rules and patterns of distribution are perceived by some to be unjustifiable and unfair (Mcloughlin, 2017).

¹⁶ There are also outstanding questions about the legitimation of local as opposed to central government authorities. The often stark differences that we see in respondents' perceptions of the two, as well as in the independent variables associated with perception change, suggest that local government is not simply a micro version of the central. In reality, there might be separate processes occurring here at the same time.

6 Conclusion

This report summarises the main findings of the SLRC longitudinal panel survey that tracked over 8,000 individuals in five countries at two points in time (2012¹⁷ and 2015). The survey was established under the SLRC's commitment to contributing 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. Through the successful implementation of the survey we have collected reliable longitudinal data on three main areas of interest:

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

Data were collected in specific survey sites in DRC, Nepal, Pakistan, Sri Lanka and Uganda. The sample size differs by country, with the smallest sample in DRC (1,243 respondents at baseline) and the largest in Nepal (3,176 respondents at baseline). The attrition rate is 14% across the entire sample, ranging from 10% to 17% for each specific country.

In this concluding section, we briefly reflect on the scope of our research design and the limits of what our data can tell us. We outline key findings in each of the main areas of interest, highlighting next steps and areas for action.

6.1 Reflections on the research design

A number of trade-offs had to be made in the the survey design to cover the enormous scope of what we set out to analyse. We did not, for example, sample specifically to capture equally-sized and representative comparison groups for all of our variables of interest. Our analytical tools are therefore slightly limited, and do not enable us to identify causal relationships. Similarly, the fact that we currently only have two waves of data means that we cannot identify results as trends.

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17 2013 in Uganda
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As there are differences in the sampling strategy used across countries and the level of representativeness, we have had to take a broad-brush approach to synthesising the findings and simply compare the statistical significance of results rather than the size of coefficients. In the next phase of this research we aim to combine the datasets, using weights to correct for the unequal selection probabilities in the different sampling frames.

A positive reflection on the process is that a number of our findings – in particular the churning within our sample – would not have been uncovered through a crosssectional survey. SLRC's method has therefore added value to existing research by using a panel rather than a cross-sectional design.

6.2 Key findings

Livelihoods and wellbeing

Most households experienced changes in food security, indicating a high degree of 'churning'.

The longitudinal panel analysis reveals fairly striking rates of 'churning' in levels of food security – that is, cycles of deprivation and improvement. And these rates are masked by measures of average change.

In other words, it is not that all households are becoming more food secure to roughly the same degree, but rather that lots of households are becoming more secure just as others are becoming less so. Thus, the aggregated picture of gradual progress conceals some quite differential rates, and indeed directions, of post-conflict recovery.

A further wave of the panel survey is required to confirm whether these households are on different long-term trajectories or if they are churning, which would also enable us to identify whether households can use assets to become better off or whether they remain caught in a low-level equilibrium.

Households have increased their ownership of bulky household assets over time, but this may not be a simple case of 'putting down roots' in response to reductions in armed conflict.

In all five countries the majority of households reported a change in assets, with most showing increases in ownership. Among these assets are bulky, durable, domestic items such as beds, tables, mattresses and fridges, with investments emerging concurrently with reported declines in fighting between 2012 and 2015.

It is possible that investments of this nature tell us something about the course of war-to-peace transitions: expensive and unwieldy assets can prove burdensome during periods of instability, both singling those households out as potentially lucrative targets of violence and also rendering migration a more problematic strategy. Conflict and instability potentially acts as a deterrent to investing in such items. The removal of this deterrent might encourage households to 'put down roots' in places that offer stronger prospects of predictability and lower levels of risk. At the same time as reporting less fighting, however, there is little evidence that households perceive themselves to be safer, either within their villages or when travelling further afield.

Efforts need to be made to better understand how the economic recovery and stability of an area intersects with people's perceptions of safety.

Some households have acquired assets through adverse livelihood strategies such as taking on debt, but more analysis is needed to understand the relationship here.

In this study we have started to explore how households acquire more assets, and a number of explanations have emerged that call for more granular data analysis. Debt levels are generally high, particularly given the reasons for borrowing money, and specific evidence from Sri Lanka suggests that some households are going into debt to buy assets. Whether this is a positive or a negative development is unclear: on the one hand, it suggests greater pressure on household budgets; but on the other hand, many households appear to have used this capital to – in some sense – get 'better off'.

So too with livelihood diversification, which is often framed as a route out of poverty. Although a higher share of households expanded their number of income-generating activities between waves, in the two African countries, we see an increase in the uptake of casual labour. Given the nature of such work, as well as the reasons why people often undertake it, we need to be cautious when interpreting the 'value' of these shifts in livelihood activities.

 Context-specific analysis on the survey sites is required to situate these specific findings within what is known about about labour markets' recovery.

Livelihood recovery and decline can be rapid, with trajectories strongly influenced by shocks and stresses that households continue to face.

Overall, the key message on livelihoods and wellbeing is about timelines and trajectories: recovery (and decline) can be relatively rapid, but the extent to which households are able to stay on upward trajectories of livelihood improvement and advances in wellbeing is strongly influenced by the diverse shocks and stresses that households in conflict-affected situations continue to face. The levels of churning and complexity of interactions between variables suggest that getting households onto positive wellbeing trajectories and into secure and sustainable livelihoods will be a protracted process and is likely to be frequently disrupted.

 Governments, donors and NGOs must bear in mind the complex interactions between variables and protracted processes when designing livelihood programmes, and look towards more realistic timescales over which to expect improvements in livelihoods.

Access to and experience of basic services and transfers

Access to basic services is puzzling, with most respondents reporting changes in journey times despite using the same provider.

More than half of the respondents reported changes between waves in journey times to their health centre and primary schools, and many of these changes were fairly substantial. This also holds true for water, albeit to a lesser extent. There are no clear patterns in the changes reported, with some households reporting worse access by wave 2 and others reporting better access. These sizable changes in journey times somewhat contradict the reports of around nine in ten respondents who stated that they were using the same services as three years previously. This discrepancy suggests a degree of change in transportation infrastructure, of which there is evidence in Sri Lanka where road quality has improved substantially over the survey period. Of course, it is also possible that the data is affected by a recall issue.

 To verify the hypothesis about changes in transport infrastructure, we need additional geographically disaggregated data from DRC, Nepal, Pakistan and Uganda. The experience of using a service – who runs it and how – determines people's satisfaction with it.

On the whole, satisfaction with services is high across both waves, and where people's perceptions change over time they mostly become more positive. Furthermore, in four out of five countries (the exception is DRC), the average number of problems reported by the respondents either fell by wave 2 or remained the same across waves. Our analysis shows that people's overall satisfaction with a service is correlated with a series of variables related to how that service is run - in other words, the experience of using the service determines overall satisfaction. To some extent, we find that the provider's identity matters; there is also evidence from a number of countries that experiencing a problem with a service in wave 2 (when no problems were experienced in wave 1) is, unsurprisingly, linked to worse satisfaction. But by far the clearest and most consistent results relate to respondents' satisfaction with specific characteristics of a service: for example waiting times at the health clinic, and teacher attendance at the school. Across all countries, those satisfied with specific aspects of the health service in wave 2 report that they are more satisfied with the health service overall.

Social protection support is inconsistent and has limited impact.

The share of households receiving any social protection support by wave has stayed fairly constant, with two exceptions (Sri Lanka and DRC). Within these households receiving social protection, we see quite a bit of churning, whereby some households have stopped accessing support, and others have started receiving it. The key finding is that few households receive support across *both* waves, with most moving 'in and out' of social protection over time. Given that the surveys were conducted in mostly rural, previously conflict-affected areas where households face a high number of shocks and stresses, there are questions here about the extent, consistency and predictability of formal institutional support to these people.

Further to this patchy coverage, those households that do receive a transfer are mostly not satisfied with its impact. For all countries, at least one third to about half of respondents across both waves stated that 'social protection is too small to make a difference'. This is potentially linked to timeliness of the transfer (with many respondents stating that the transfer is often delivered late), but could also be a result of low transfer values, both of which reduce the transfer's impact potential. Policy-makers need to consider the effectiveness of social protection programmes in terms of reliable coverage and transfer value, to ensure that the interventions better meet the great expectations that are often attached to them.

Few households receive long-term livelihood support, but satisfaction remains high nonetheless.

The majority of households did not receive livelihood support in either wave, and those that did churned in or out of participation over time. Even though the majority of survey households worked in agriculture across both waves and faced a range of shocks, it seems that most households received little long-term livelihood support. At the same time, however, we see higher levels of satisfaction with livelihood assistance than for social protection, with around two thirds or more of respondents across all countries stating that the livelihood assistance that they receive 'improves their livelihood'.

Perceptions of government

Unexpectedly, we find very few associations between perceptions of government and safety, conflict, education and wealth.

Surprisingly, we find no association between perceptions of local safety or exposure to conflict and perceptions of government. We expected education to be a determinant of perceptions since government policies have different impacts on low- and highly-skilled segments of a workforce. Some isolated associations emerged between household wealth and receipt of assistance and perceptions of government, however, we do not observe the overall trend here that we had anticipated.

Identity and geographical location make a difference in people's perceptions of government.

Some of the strongest underlying associations with people's perceptions of government relate to aspects that do not change over time. Whereas aggregate measures of people's perceptions (and other proxies of legitimacy) can mask inter-group variation, our disaggregated data on ethnicity and geography represent consistently strong variables across the regression analyses and suggest that there are both identity-based and territorial aspects to legitimacy. This is important because it raises the question about whether the government is only considered legitimate by specific groups and categories of people. The very fact that such variation exists, demonstrates that legitimisation is neither an even nor linear process. It also hints at the politics involved in legitimisation strategies (see Mcloughlin, 2015b).

Accountability mechanisms and opportunities to participate matter more for perceptions of government than access to or satisfaction with services.

Although our analysis does not support the idea that improvements in service delivery necessarily generate more positive perceptions of government, it does show that relationships exist. In other words, under certain circumstances and conditions, it appears possible that *particular aspects* of public services may shape the way in which people think about their government. Access, as measured by journey times, is not one of these aspects. Neither is satisfaction, for the most part, although we do find isolated cases.

There is evidence from both waves that opportunities for participation (knowing about and attending consultations) and the presence of accountability platforms (like grievance mechanisms) are associated with better perceptions.

As laid out in the baseline synthesis (Mallett et al., 2015) and evidenced again here, governments and other service providers should recognise the importance of interactions and relationships within the arena of service provision, specifically with regards to the 'legitimating potential' of service delivery.

Bad service delivery can undermine perceptions of government, but questions remain about the dual processes of legitimisation and de-legitimisation.

We see from the evidence that the association between service delivery and state-building may not always be positive. The relatively strong and consistent finding that any kind of problem with basic services shapes views of government tells us a number of things. At the most basic level, it shows that people care about the services they are getting, and that problematic service delivery potentially affects not just people's relationships with and attitudes towards local-level providers – whomever this is – but also attitudes towards the government itself.

The state-building policy agenda assumes that, given the right investments and attention, service delivery can play a positive role in building state legitimacy. But the data clearly suggest that people care most about the *quality* of

services provided. The fact that problems with services seem to share a stronger underlying association with perceptions relative to several other aspects of service delivery (e.g. access) suggests that a bad experience in the past can affect perceptions months or years later. 'Bad' service delivery can undermine people's perceptions of government – and potentially have a delegitimating effect.

The implication for policy is that, from a state-building perspective, scaling up access – for example, enrolling more children in school, bringing health facilities physically closer to communities – is only one part of what needs to be done. An emphasis on quality is important for state legitimacy, as well as better development outcomes more broadly.

Beyond the specific findings and recommendations outlined, there are three overarching lessons. First, that identity and geography are far more important for people's lives than aid, programmes and technical statebuilding efforts. We find that ethnicity and geographical location at baseline are strongly associated with perceptions of government, suggesting there are both identity-based and territorial aspects to legitimacy. This association with ethnicity is country-specific, which raises the question of whether the government is only considered legitimate by specific groups and categories of people. Other outcomes are also strongly correlated with identity and geography: for instance, access to services. The next step will be to carry out further analysis to assess how far ethnicity, geography and gender affect the churning that we find in much of our sample.

Second, whilst donors may be moving away from simple, transaction approaches to state-building ('deliver services - get legitimacy') as evidenced in DFID's framework for building stability (2016), the SLRC survey's findings suggest that wherever the solutions to building stability are found, they are likely to be messy and complicated. The SLRC survey takes us beyond the truism that conflict dynamics are neither linear nor simple, and stresses how all manner of shocks, not solely those related to conflict, continue to disrupt socio-economic recovery, and how certain outcomes (for example, reduced conflict and improved safety) don't always run on parallel tracks. Just as Zaum et al. (2015, following Acemoglu and Robinson, 2012) have asserted that, in frameworks for working fragile and conflictaffected situations, 'all good things don't necessarily go together', the SLRC survey suggests that, in the conflictaffected situations that we have studied, good things don't necessarily work in the same direction.

Finally, the experiences of establishing longitudinal panels in DRC, Nepal, Pakistan, Sri Lanka and Uganda suggest we can recalibrate our expectations of research methods in fragile or conflict-affected countries. A combination of both luck and good design has allowed the SLRC to deliver a robust and valuable panel data set in some particularly difficult contexts where quantitative research is often assumed to be too difficult, too expensive and too risky. The value of a longitudinal panel is also proven: it has allowed us to build an understanding of the dynamics of people's lives – especially churning – that could not have been identified using other quantitative methods. In this way, a longitudinal panel has provided invaluable evidence.

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Appendix 1: Detailed methods

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Cross-sectional surveys provide a snapshot of a situation at a particular point in time. Longitudinal surveys provide information on changes and trajectories over time. The SLRC survey is a panel survey, which is a particular type of longitudinal survey where the same panel – which in our case constitutes individuals – is followed over a succession of survey rounds. In the SLRC panel survey we surveyed individuals over two rounds, in 2012/13 and again in 2015. An advantage of panels is that they allow for the direct study of change within, for example, a household or an individual. This is substantially different to observing an event and people's situation only at a single point in time.

As with other types of surveys, panel surveys face methodological challenges such as non-response to some of the questions. The major challenge for panel surveys is the risk of attrition, meaning drop-out from the sample. But there are other challenges too, which we discuss in the sections that follow, along with how we dealt with each issue. This section is split into four parts, focusing respectively on: design, data collection, sampling and weighting, as well as analysis.

A1. Design process

The first wave of the SLRC survey took place in 2012 (2013 in Uganda). The survey took about one and a quarter hours to complete, and covered household characteristics; livelihoods (food security, assets and what people do for a living); access to basic services; aspects of service delivery and satisfaction with them; questions about experience of shocks, crimes and conflict; social protection and livelihood assistance; and participatory processes and perceptions of government. Given the ambitious breadth of the survey, we had to compromise on the level of detail collected under each of the survey modules. Further details on the methods can be found in the SLRC process paper (SLRC, 2015) and baseline synthesis report (Mallett *et al.*, 2015).

The survey was designed partly with the objective of looking for similarities and differences across the five

survey countries. This meant that consistency was a key consideration throughout the survey process. The same principle also guided our approach to the second wave, where we tried to stay as true to the first wave as possible. Nonetheless, the second round threw up various additional methodological challenges, which are described in detail in this section.

A1.1 Deciding who to track

The SLRC survey incorporates elements of both a livelihoods and a perception survey. This raises a methodological issue, in that the ideal unit of analysis for the livelihoods survey is the household (e.g. how much land does *your household* own?), while for the perception survey it is at the individual level (e.g. do *you* agree that the local government cares about your opinion?). Both types of questions were asked to one individual within each household.

In the baseline analysis, roughly half of the analysis focused on household-level indicators and the other half on individual-level data. In planning for the second wave, a key question was whether to re-interview the exact same respondent as in wave 1 or whether it would be sufficient to interview anyone else from that original household - it is much harder to find the exact same individual three years later than to find anyone from their household. We expected high attrition rates, partly as a result of labour migration and displacement due to natural disasters and instability. However, to interview someone other than the original respondent would mean we would not have a panel dataset for the important individual-level characteristics (e.g. satisfaction with services; perceptions of government). Even the reliability of household-level indicators could be jeopardised by interviewing a different respondent, since responses to household-level questions, for example about food security or asset ownership, are rarely what we might call objective (Bardasi et al., 2010; Coates et al., 2010; Demombynes, 2013). After extensive deliberation and consultation, we concluded that our research questions would be best answered by tracking the exact same

respondent within households, so that we could be more certain that any changes over time were 'true' changes and not just a different perspective from a different respondent.

If we were unable to find a respondent by the end of fieldwork, their household dropped out of the sample. Although it is common in panel surveys to replace households that drop out with new households, we felt that this was unnecessary in our case as we only have two survey waves. Instead we re-weighted the sample to reduce attrition bias (see Section A3).

A1.2 Changes to the survey instrument

The SLRC panel survey instrument was designed to generate data on a wide range of topics, including livelihoods, access to and experience of basic services, civic engagement and perceptions of government. Details on the construction of the survey instrument and the choice of questions can be found in the baseline synthesis paper (Mallett *et al.*, 2015), while justification for questions specific to each country's survey instrument can be found in the respective baseline country reports (de Milliano *et al.*, 2015; Mayadunne *et al.*, 2014; Mazurana *et al.*, 2014; Shahbaz *et al.*, 2014; Upreti *et al.*, 2014).

Conducting a panel survey implies asking the same questions to the same panel (in our case, individuals), so that changes can be measured over time. However, certain adaptations were made to the survey instrument in wave 2 for each of the five countries. These adaptations were of three types: (1) the addition of questions to capture changes in context or circumstances; (2) the removal of redundant questions; (3) rewording of existing questions as fieldwork and analysis subsequent to wave 1 suggested that certain questions captured inaccurate information or were culturally inappropriate (despite having piloted the survey instrument prior to running wave 1). The questions added to the survey instrument in the second round were chiefly to help us to find an explanation for changes. However, such changes and additions were quite exceptional: more than 90% of each country's original survey instrument remained unchanged.

Finally, modules and questions were sequenced in the same order in the second-wave instrument. We felt this was important because ordering can affect the way in which people report against particular questions (van de Walle and van Ryzin, 2011). Thus, maintaining the original sequencing was another step taken to ensure that the research design itself – or rather changes to the design – did not drive changes in the variables.

A1.3 Timing of the survey

Ideally, data collection for each wave of a panel survey should take place at the exact same time of year. This is to minimise the possibility that changes in responses are driven by a predictable and annual change in conditions, for example, the agricultural season or a certain point in the school year. Due to various factors, however, there were some small differences in the timing of fieldwork conducted in each country (see Table A1).

Further details on these changes are found in the individual wave-2 country reports (Ferf *et al.*, 2016; Marshak *et al.*, 2017; Sanguhan and Gunasekara, 2017; Shahbaz *et al.*, 2017; Sturge *et al.*, 2017).

Country	Wave 1 data collection	Wave 2 data collection	Reasons for change
DRC	October 2012	September – December 2015	Proposed local elections; smaller survey team
Nepal	Late September – early November 2012	Mid-September – late December 2015	Political protests blocking roads; security threats; timing of festivals
Sri Lanka	Mid-September – end October 2012	Mid-September – early November 2015	Elections; smaller team meant that main phase of tracking ended earlier (early October)
Pakistan	September – October 2012	August 2015. Tracking until December 2015.	Religious holidays; earthquake delayed tracking
Uganda	January – February 2013	January – April 2015	Month-long break between main phase and tracking phase

Table A1: Timing of data collection for each country sample and wave

A2. Data collection

The number of enumerators in each country's fieldwork team ranged from 10 (DRC in wave 2) to 40 (Nepal in wave 2). An effort was made in all cases to have a sufficient ratio of female-to-male enumerators. Preparation for the data collection consisted of a training week (or couple of days) to familiarise enumerators with the survey's objective, the survey instrument's content, and, where applicable, the use of electronic tablets.

All countries used paper surveys in wave 1, whereas four out of five countries opted to use electronic tablets for data collection in wave 2 (the exception was Pakistan, where security restrictions prohibited their use). The surveys were translated into local languages prior to the training sessions and data collection. In some cases, surveys were carried out in multiple languages within a country, for example in *Lango* and *Acholi* in Uganda.

Before going to the field, it was unclear how the tablets would fare, given the patchy electricity coverage and lack of internet connection at some sites. The specific software program and hosting platform used to collect and store the data differed by country (details can be found in the wave-2 country reports). There were very few problems with the tablets' performance in the end: indeed, working with tablets had some major advantages. For example, data could be uploaded in the field and checked in real time by the central country team. Feedback was then given to the survey team on enumeration quality, discrepancies in household identification numbers between waves, and other inconsistencies that all helped to greatly improve data quality. The use of tablets also meant that paper surveys didn't need to be transcribed, thus removing one step where human error might creep into the dataset.18

One of the main challenges we faced with second-wave data collection was the likelihood of attrition – the loss of at least some individuals from our original panel for whatever reason. Attrition poses a threat to the internal validity of a panel survey, so there is a need to keep it as low as possible. To this end, we were able to use some useful information collected in the baseline to track down respondents, including their address, phone number (for some respondents), the household roster (in order to describe the household to others living in the same community), and in some cases, their global positioning satellite (GPS) coordinates. GPS coordinates were also plotted on a map in advance of fieldwork, to locate respondents and organise the data collection. Furthermore, to get a sense of how much attrition to expect, a pre-fieldwork test was conducted in each country. This consisted of a small team of enumerators attempting to establish all respondents' whereabouts in those sub-samples within a few days.

The sample size in 2012 was calculated to equal 120% of what would be needed in order to achieve statistical significance and representativeness at a particular level. This meant that in the second wave it would be necessary to find approximately 83% of the original respondents in order to maintain statistical power at those levels (an attrition rate of 17%). In each country a 'tracking' strategy was devised: the first phase of data collection would involve trying to locate every respondent in his or her original village, followed by a second phase where missing respondents would be tracked based on their ease of access. Ideally, when not all missing respondents can be intensively tracked due to resource constraints, a random selection would be drawn to be tracked, to minimise the risk of bias from convenience sampling. In some cases, however, there was no alternative but to track those clustered in the most accessible locations (again, precise details are given in the respective country reports).

A3. Sampling and weighting for non-response

It is important to note that our samples are not representative at the national level although, for the sake of brevity, we refer to them using the country name. As such, when we refer to Uganda, we are using this as short-hand for 'the sample drawn for our study from Uganda', which is in fact representative only of two subregions within that country. The precise sampling method is outlined briefly in this section, with more detailed information provided in the respective country reports (Ferf *et al.*, 2016; Marshak *et al.*, 2017; Sanguhan and Gunasekara, 2017; Shahbaz *et al.*, 2017; Sturge *et al.*, 2017).

The initial sample in each country was drawn differently depending on the level of representativeness that was to be achieved. In practice, this means that at the higher levels of aggregation in most countries – for example

¹⁸ This is not to say that tablets are 'fool-proof' in terms of minimising the chance of human error. In our case, however, we can claim that errors were reduced by the fact that incoming data was monitored in 'real time', so we could rule out the possibility that an error had been introduced during transcription and also try to resolve the error while the case was still fresh in the enumerator's mind.

region and district – the precise sample sites were purposively sampled. Respondents were then randomly sampled at the chosen level of representativeness, in most cases, village or another small unit of aggregation.

There was some attrition in each country in the second panel wave, ranging from 10% to 16% (see Table 1). This attrition was non-random, since there were some predictors of attrition in all cases. For example, it was predictable that a respondent who had been very old in wave 1 might be deceased by wave 2, or that we would not be able to find male respondents in their early twenties because they are likely to have migrated. Marriage was often the cause of attrition in the case of girls and young women.

To minimise attrition bias – meaning that we were more likely to lose particular types of individuals from the sample due to their characteristics – non-response weighting adjustments are used in the wave-2 analysis. In any given dataset, there is a design weight that is given to all units (in this case, respondents) at baseline. This is because at the lowest unit of representativeness all respondents have, in theory, an equal selection probability, and although our data can be aggregated at higher levels (e.g. region), we do not claim that conclusions made above this level are representative. In finding that attrition from our sample at follow-up is non-random, it is necessary to adjust the design weight to restore the original sample's proportions (Brick and Kalton, 1996; Kish, 1990).

Using wave-1 data for each country, a Probit regression was run with the outcome variable 'response' (respondent in wave 2=1, non-respondent at wave 2=0) and including a list of covariates that could at least partly explain non-response in wave 2 (e.g. deceased, migrated, married). This technique, known as response propensity weight adjustment, replaces the unknown probability of response with an estimate, which is a function of observed or known characteristics about the respondent (Brick, 2013; Kalton and Flores-Cervantes, 2003; Särndal and Lundström, 2006). Following the Probit regression, the probability of response is calculated for each individual. Then the inverse of the probability is taken, which becomes the non-response adjustment. The final weight for each wave is calculated by multiplying the design weight and the non-response adjustment. Nonrespondents in wave 2 end up with a weight of 0 and all those remaining in the sample have a weight greater than 1. Put differently, this means that those remaining in the sample take on greater emphasis, the more similar they are to those who have dropped out.

A4. Analytical methods

The complexity of the dataset can pose a serious challenge when it comes to data analysis. There are up to two observations for each respondent, and it is likely that their responses to some questions will be correlated over time. As such, the way we approach this from an analytical perspective has implications for the validity of our estimates. In this section we describe the workings of two commonly used estimation models and explain our choice of model for this analysis.

A4.1 Fixed and Random Effects models

Consider a simple model with one time period where **y** is the dependent variable, α is the intercept, β is the coefficient of variable *x*, for *k* independent variables and for *i* individuals (respondents in our case).¹⁹ For the function that relates *x* to *y* there is the unobserved error term ε for each individual.²⁰

$$y_{i} = \alpha + x_{ki}\beta_{k} + \varepsilon_{i}$$

In our case, where we have observations for more than one time period, the problem is that the error terms are likely to be correlated for the same individual across time because there are some key characteristics about that individual that do not change. This violates one of the core assumptions for unbiasedness of the estimator in the model above.

Even if we control for everything that we can *observe* about that individual (by inserting a vector of *k* covariates into the model), there are still likely to be unmeasured individual factors that have an influence on an individual's outcomes over time. To put it differently, when a respondent answers whether or not they believe that the government cares about their opinion, their answer will be based on their personal beliefs, opinions, preferences, expectations, lived experience, personality and mood. Some of these

¹⁹ The dependent variable is also known as the variable of interest or outcome variable and is the variable that you are modelling the 'effect' of something on. Independent variables are the variables that you estimate the effect of. The intercept is the value that the dependent variable takes when all independent variables are set to zero (this is not universally true but it applies in our analysis).

²⁰ We are indebted to Baum (2006: Ch.9) for the models presented in this section.

we can attempt to capture (for example, we can control for the fact that people displaced by conflict are likely to have had a different experience to those who remained, and this may also affect our variables of interest), but most of these factors remain unobserved. If not dealt with then these unobserved confounding factors will result in biased estimates.

There are ways of addressing this bias when it comes to modelling such a relationship. Consider now a model where there are different time periods, denoted by *t*; where some of the covariates are time-variant (meaning they can and do change over time), denoted by *x*; and where others are time invariant (meaning they do not change over time for anyone), denoted by *z*:

$$y_{it} = x_{kit} \beta_k + z_{ji} \delta_j + u_i + \varepsilon_{it}$$

For each of the *k* variables that do vary over time (*x*) there is coefficient $_{\beta}$ and for each of the *j* time invariant variables (*z*) there is coefficient δ . The error term is now also split into two components: one that varies over time, and one that doesn't, or in other words, the disturbance term ε and the individual-level effect *u*. This model requires four basic assumptions:

- **1** Observations are independent and identically distributed (i.i.d), where
- 2 $E(\varepsilon_{it} | X_{kit}, u_i) = 0$ (errors are independent of the individual-level effects of the regressors in all periods)
- 3 Var $(\varepsilon_{it} | X_{kit}, u_i) = \sigma^2$ (the variance of the errors is homoscedastic)
- 4 Cov $(\varepsilon_{it}, \varepsilon_{is} | X_{kit}, u_i) = 0 \forall t \neq s$ (and there is no serial correlation of the errors.)

The remaining question is how to treat the individual-level effect, $u_{i'}$. One approach is to assume that the individual-level effects are 'randomly' distributed across individuals and uncorrelated with everything else in the model:

 $E(u_i | X_i, \delta_i)$, a constant (the individual-level effects are uncorrelated with the regressors in all periods).

This is known as the Random Effects model (RE). Yet the assumption that individual effects are randomly distributed is rather strong. In a nutshell, RE assumes that the time-varying observed regressors are uncorrelated with time-invariant unobserved characteristics. For this model to make unbiased estimates, we have to control for everything about the respondent that doesn't change over time, but that might be correlated with things that do change. In other words, we would have to accept that there is nothing else about the respondents themselves, *besides what we have measured and included in the model*, that explain outcomes in any of the variables. A strength of this model, however, is that it can estimate effects for variables that do not change over time (time invariant variables denoted by *z* in the model above).

An alternative model, the Fixed Effects model (FE) rejects this assumption and assumes that there *is* a correlation between the individual level effects and the regressors.²¹ When the u_i are correlated with some of the regressors, the bias can be reduced by treating them as parameters in the model or, in other words, by controlling for every individual in the sample.

A drawback of the FE model is that it cannot estimate the effect of time invariant variables. This is because when 'controlling for' the unobserved differences between individuals, the model can only estimate within-individual effects. These rely on there being a change between waves 1 and 2 for a given regressor. When there is no change in the regressor, there is no comparison observation against which to estimate the effect that a change *would* have. This is not a problem in the RE model since it estimates the effect of a change based on a comparison group that includes any individual in any wave.

What follows from this, is that the interpretation of the estimated effects differs depending on which model you use. The following figure illustrates simply what each model is able to tell us.

21 It should be noted that FE and RE are not the only models that can be used to analyse longitudinal data. For a discussion of more options for longitudinal modelling see Rabe-Hesketh and Skrondal (2008) and Dougherty (2011: Ch. 14).

Figure A1: An illustrated example of the difference between FE and RE models

In this example there are three households (HH), each represented by a circle. There are two panel waves and each household has an observation in both. Assume each household has a value for the Coping Strategies Index (CSI) wherever that household appears. We are testing the effect of CSI on an outcome variable, say, perception of central government.



Fixed effects model:

This model estimates the effect of a change within a household (or individual respondent) on the change in the outcome variable.

To calculate the expected change in the perception of government, it calculates a function of the black lines, which are differences in the value of CSI from one time period to the next.



Random effects model:

This model estimates the combined effect of a change within a household (or individual respondent) and differences across households, potentially within the same wave, on the outcome variable. The model calculates differences across all instances of a particular value, regardless of whether they came from the same individual over time or not.

To calculate the expected change in the perception of government, it calculates a function of the black lines, which are differences in the value of CSI.

A4.2 Deciding which model to use

Deciding whether to use the RE or FE model is both a conceptual and statistical decision. It is possible to test whether the assumptions of the RE model *do not* hold using the Hausman test (Hausman, 1978). Theoretically, it would make sense to run the Hausman test on each pair of models for each outcome variable to determine whether the assumptions appear to hold water in each case. However, an objective of the SLRC survey is to

look for similarities and differences across the various sample populations. Therefore, the models used in each country analysis must be exactly the same (or as similar as possible given the differences in available data across countries). With this in mind, the decision whether to use FE or RE was made based on conceptual justifications.

Ultimately, the FE model was chosen since it is designed '[s]ubstantively... to study the causes of changes *within* a person [or entity]' (Kohler and Kreuter, 2009: 245, emphasis ours), and this is the focus of our research rather than the study of macro-level processes. It is also highly doubtful that we can make the assumption inherent in the RE model that all personal differences between individuals can be accounted for by the control variables. For this to be true, we would need to capture such elusive traits as 'expectations' of services and 'personality', or risk omitted-variable bias resulting from the failure to control for these (Torres-Reyna, 2007). Clarke et al. (2010) describe in detail the selection process between RE and FE in the context of education studies, noting that the RE assumption will not hold in practice when the mechanism driving the outcome 'is only partially understood and perfect measures of all the factors driving [the outcome] are rarely available'. This certainly applies to the SLRC survey. While we have included a broad range of explanatory variables in our surveys and regressions, we know that we are only capturing aspects of the processes that drive complex outcomes such as perceptions of government.

Deciding on the FE model still leaves us with the problem of how to estimate the effect of time-invariant factors, such as gender of respondent or displacement in a conflict prior to baseline (which are some of our most important variables of interest). The only way to estimate the effect of variables that do not change over time and to correct for correlated residuals over time is by using RE. To get around the problem of unrealistic assumptions, we tried using the Mundlak correction (Mundlak, 1978), which allows for all possible correlations between u_i and the regressors x_i . However, the estimates of time-invariant effects did not prove more efficient than those in the RE model.²² In the end, we decided to run the RE model alongside the FE model, but only to estimate the effect of time-invariant variables.

Those who look at FE and RE models with the same set of regressors side-by-side, will note that although the coefficients usually remain almost identical in terms of size and direction of effect, there are always more statistically significant results in the RE model. This is because the standard errors of the coefficients are larger in the FE regression, and these are used in the test for significance. Though it may be tempting to choose a model that provides the most significant results, in our case we cannot ignore the possibility of omitted-variable bias in the RE models. Because of this, it is only used when there is no FE option to estimate an effect of a variable of interest.

A4.3 Outline of analysis

The main outcome variables of interest are broadly the same as in the baseline analysis (Mallett *et al.*, 2015) and are described in more detail in Table 2 in the main report, as well as listed here:

- Coping Strategies Index (CSI)
- Food Consumption Score (FCS)
- Morris Score Index (MSI)
- Access to health centre
- Access to school (boys/girls)
- Access to main water source
- Access to social protection
- Access to livelihood assistance
- Satisfaction with health centre
- Satisfaction with school (boys/girls)
- Perception of water quality
- Satisfaction with social protection
- Satisfaction with livelihood assistance
- Perception of local government actors
- Perception of central government actors.

In each of the regressions, the same core control variables were included: gender, age and education level (of the household head for household-level outcomes or of the respondent for individual-level outcomes), ethnicity of the household, location at baseline, and whether the location is urban or rural.²³ These controls are fixed at baseline, meaning that they only appear in the RE regression: they tell us something about the influence of conditions that pre-existed any changes in the outcome variable. However, since we are testing so many hypotheses about how our outcome variables change, each regression contains a vector of independent variables that we anticipate will be linked to changes in the outcome.

A limitation of our analysis design is that many of these independent variables are also outcome variables. As such, we have a situation where, firstly, some independent variables may be influenced by changes in the outcome variable (in short, a problem of reverse causality) and, secondly, some independent variables are also determinants of one another (a problem of

^{22 &#}x27;Efficient' in this context means that the variance is small, which improves the chance of detecting statistically significant effects. As Allison (2009) points out, a strength of the RE model is that it is efficient in terms of reducing the size of the variance.

²³ In controlling for location at baseline, this means that we control for primary sampling unit (PSU), however this is not the same thing as fixing effects at the PSU.

selection bias).²⁴ What results is, firstly, we cannot claim that our results confirm the *direction* of causal effects and, secondly, some of the coefficients may be underestimated (in other words, more subject to 'type-II errors' or 'false negatives').

In addition to the regressions, extensive descriptive statistics were produced and drawn on in the analysis,

which show, for all variables of interest, the crosssectional mean or distribution in both waves and the number of 'switchers and stayers' between waves. This terminology (ours) refers to the differentiation between respondents who kept their answer to a given question the same between waves, and those who switched their answer. We often further disaggregate switching into an 'upward' or 'downward' switch, or similar.

²⁴ These limitations are clearly elaborated on in Angrist and Pischke (2008).



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Cover photo: the parched landscape of Matheniko County seen from the air. The villages are circular structures made up of huts ringed by brushwood fences. © Mikkel Ostergaard











