

Sending cash to remote communities: A report on GiveDirectly's Remote Payments Project

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Executive Summary

Cash transfers are a uniquely effective and efficient development intervention, supported both by rigorous, experimental evidence and growing political support. They have a large part to play in alleviating global poverty.

In remote areas, poverty is disproportionately located. However, remote areas also present considerable operational challenges to implementing organisations. As a result, they have proved a barrier to the widespread adoption of cash.

This report evaluates GiveDirectly's Remote Payment Project which, between November 2016 and May 2017, delivered large (~880 USD) cash transfers through mobile payments to 555 recipients living in extreme poverty in one of the remotest areas in Uganda. The goal: To clarify the challenges of delivering cash transfers to extremely remote areas, and to inform the decisions of other organisations who may seek to deliver cash transfers in them.

The report is structured around three key questions, with key findings summarized below:

1. Is it feasible to deliver cash transfers to remote locations?

The short answer: yes. We find that cash can be delivered safely, securely and efficiently to recipients in remote areas. Very few recipients failed to collect their transfers, although many travelled considerable distances to do so. In this setting, mobile money offered a viable and beneficial delivery-channel for cash.

GiveDirectly found that programs in remote areas can deliver high operational efficiency, reported at 71.5% for this program (measured by taking the total transfer value as a percentage of the overall project cost, including *all* direct and indirect costs). GiveDirectly estimate that, at scale, efficiency could have surpassed 80% — considerably higher than publicly-available benchmarks for the delivery of in-kind aid to remote locations.

2. What is the experience of the individuals, families and communities who receive these transfers?

This report is not a formal experimental study and makes no claim to attributing causality with regards to impact. However, GiveDirectly reported recipients investing in a similar manner to those recipients for whom a transformative impact has been recorded in previous, experimental analyses – often travelling considerable distances to the nearest major market centre to do so. A number of recipients self-reported life-changing impact to GiveDirectly.

3. What is the wider impact of cash on both local markets and financial service providers in remote areas?

Local markets and financial service providers appeared able to respond to large injections of capital. Mobile money agents reported a considerable increase in business, far exceeding the transfers themselves and suggestive of an economic multiplier in the surrounding economy. Local markets boasted increased diversity of goods and services.

Financial inclusion also improved: GiveDirectly registered recipients on mobile money, but also saw bank account ownership and use of local savings groups grow organically. Price rises were reported by recipients, however. The most directly comparable study suggests that price rises witnessed in this program may have been localised and temporary. Confirming this would require further study; in the meantime, GiveDirectly propose universal targeting within recipient villages as a potential mitigation for this effect.

Where remoteness, weak markets, and poor provision of financial services are seen as a barrier to the implementation of cash, the Remote Payments Project illustrates the feasibility and benefits of delivering cash in challenging contexts, and the potentially transformative impact of doing so.

About GiveDirectly:

GiveDirectly is a US-based NGO that delivers large, unconditional cash transfers to households living in extreme poverty. This approach stems from rigorous experimental evidence of impact and GiveDirectly's core values of efficiency, transparency, and respect. By answering key policy questions, GiveDirectly also aims to serve as a knowledge laboratory to optimize and expand the use of cash transfers in development.

Sending cash to remote communities: An introduction

This report analyses GiveDirectly's Remote Payments Project, a program of unconditional cash transfers delivered by GiveDirectly in Northern Uganda, between November 2016 and May 2017. The purpose of this evaluation is to inform the decisions of implementing organisations who may seek to deliver cash transfers in remote settings, or in settings where they are faced with challenges that mirror those experienced in remote settings.

The evaluation seeks to address three key questions:

1. Is it feasible to deliver cash transfers to remote locations?
2. What is the experience of the individuals, families and communities who receive these transfers?
3. What is the wider impact of cash on both local markets and financial service providers in remote areas?

Section 1 of this report summarises the current evidence base on the impact of cash, and the operational barriers to widespread adoption of cash transfers in development contexts. It also presents the Remote Payments Project and its goals in more detail.

Section 2 describes the operational challenges presented by the Remote Payments Project and how GiveDirectly adapted the design of the program to address these challenges.

Section 3 presents the results of the program, focusing on: feasibility; cost; and the illustrative impact on recipients, communities, and the local economy.

Section 4 presents the authors' conclusions with regards to: the feasibility of working in operationally complex locations, the trade-offs associated with doing so, and recommendations for future investigation and study.

Data for this evaluation were collected by GiveDirectly field staff, and this report was written by the GiveDirectly management team who implemented the Remote Payments Project. It is not an experimental study, and as such does not make comparisons against a counterfactual or control group. The limitations of this study are documented in 4.2, alongside related avenues for future research.

1. Cash transfers in operationally challenging contexts.

1.1. Cash: the gap between evidence and implementation.

The evidence for the positive impact of cash transfers in development is compelling. In July 2016, the Overseas Development Institute reviewed 165 experimental studies in 30 countries, outlining the wide range of positive outcomes that result from sending cash directly to recipients living in extreme poverty¹.

A randomised controlled trial studying GiveDirectly's unconditional cash transfers in Western Kenya, published in 2016, shows this diversity of impact, with recipients experiencing increases in asset value (+61%), earnings (+33%) and food expenditure (+19%), as well as significant improvements in food security, psychological well-being and female empowerment.²

Evidence of long-term impact is now emerging too. Separate studies in Northern Uganda³ and Sri Lanka⁴ showed that recipients' earnings were respectively 38% and 64-96% higher four and five years after receiving one-time transfers. Meanwhile, preconceptions that the poor will waste money have proven unfounded. UNICEF⁵ recently reviewed and debunked six common cash transfer myths, including that recipients waste money on drugs and alcohol and that cash makes them lazy (drawing on World Bank⁶ and MIT⁷ studies respectively to do so).

Cash has also proved to be a cost-efficient intervention. GiveDirectly's Ugandan operations in 2016 operated at ~90% efficiency, meaning 90c in every donated dollar reached recipients' digital wallets. An analysis of UN interventions in Somalia in 2011 showed that 85% of cash transfer budgets went directly to beneficiaries, compared to just 35% for food aid programs.⁸

Strong political support now exists for a considerable increase in the use of cash transfers. At the World Humanitarian Summit in 2016, Ban Ki Moon, then Secretary General of the UN, told world leaders that,

¹ Overseas Development Institute, "Cash transfers: what does the evidence say?", 2016, <https://www.odi.org/sites/odi.org.uk/files/resource-documents/11316.pdf>

² Haushofer, Shapiro, "The Short-Term Impact of Unconditional Cash Transfers to the Poor", 2016, https://www.princeton.edu/~joha/publications/Haushofer_Shapiro_UCT_2016.04.25.pdf

³ Blattman et al, "The Economic and Social Returns to Cash Transfers", 2013, http://cega.berkeley.edu/assets/cega_events/53/WGAPF_Sp2013_Blattman.pdf

⁴ De Mel et al, "One-Time Transfers of Cash or Capital Have Long-Lasting Effects on Microenterprises in Sri Lanka", 2012, <http://science.sciencemag.org/content/335/6071/962.full>

⁵ UNICEF, "Myth-Busting? Confronting six common perceptions about unconditional cash transfers as a poverty reduction strategy in Africa", 2017, <https://www.unicef-irc.org/publications/899/>

⁶ World Bank, "Cash Transfers and Temptation Goods", 2014, <http://documents.worldbank.org/curated/en/617631468001808739/pdf/WPS6886.pdf>

⁷ Banerjee et al, "Debunking the Myth of the Lazy Welfare Recipient", <https://economics.mit.edu/files/10861>

⁸ Overseas Development Institute, 2016

“Where markets and operational contexts permit, cash-based programming should be the preferred and default method of support.”⁹

However, in spite of the weight of evidence and growing political will, the implementation of cash transfers lags far behind the evidence. Cash makes up just an estimated 7% of all humanitarian spending today. Cash giving is still dwarfed by in-kind interventions, often with less evidence of effectiveness.¹⁰

1.2. The barriers to cash: “Where markets and operational contexts permit”

This program looks at one of the potential barriers to the wide-scale adoption of cash transfers in development and humanitarian contexts: the challenges of operating in extremely remote areas.

The reasons for doing so are twofold. On one hand, the operational challenges of delivering cash to remote areas are acute and present real barriers to implementing organisations. On the other, the needs of those who live in these areas are great, often exceeding those living in non-remote areas, and so the benefits of reaching them are compelling.

Remoteness creates a range of challenges for potential implementers of cash transfer programs. Physical remoteness makes it hard to reach commercial centres, for traders to supply their businesses, and for implementing organisations to reach recipients and deliver aid. As a result, markets in remote areas tend to be weaker, with less diversity and reduced provision of basic services – such as schooling, healthcare and financial services. We discuss the specific challenges experienced by GiveDirectly in the Remote Payments Project, in more detail in section 2.1.

As a result of the above, remoteness is strongly correlated with increased poverty. In 2000, the Government of Uganda labelled poor market access “a priority cause of poverty”. Studies of poverty in the Horn of Africa, including Uganda, show a correlation between high poverty and both travel time to regional market centres ($r^2 = 0.83$) and low population density ($r^2 = 0.92$)¹¹ – both typical of remote locations. Remoteness is also widespread: the World Bank estimates that 62% of households in Sub-Saharan Africa live in rural areas¹², and a high-proportion of those in areas that are deemed “inaccessible”, especially in East and Central Africa¹³.

The result is that large populations live in poor areas which present considerable operational challenges to implementing organisations. We know that cash can have a transformative impact on those living in extreme poverty. This report focuses on whether,

⁹ CaLP, “CaLP Press Release : Ban Ki-moon - give people cash not goods as best form of assistance in emergency”, 2016, <http://www.cashlearning.org/news-and-events/news-and-events/post/333-press-release--bank-ki-moon---give-people-cash-not-goods-as-best-form-of-assistance-in-emergency>

¹⁰ Overseas Development Institute, 2016

¹¹ Pozzi, Robinson, “Accessibility Mapping and Rural Poverty in the Horn of Africa”, https://www.researchgate.net/publication/255653727_Accessibility_Mapping_and_Rural_Poverty_in_the_Horn_of_Africa

¹² World Bank, 2016, <http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=ZG-ZF>

¹³ Linard et al, “Population Distribution, Settlement Patterns and Accessibility across Africa”, 2010, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3283664/>

even when facing the considerable operational challenges of remoteness, “markets and operational contexts” do indeed “permit” the delivery of cash transfers.

1.3. The design of the Remote Payments Project

To test this idea, GiveDirectly delivered cash transfers to recipients living in the remote north of Uganda: rugged, mountainous, and more than 400 km from the capital of Kampala.

Recipients were enrolled in late 2016 and completed transfers in May 2017. 550 recipient households received a total of \$486,000 over the course of the program (~\$880 per household). Transfers were sent in three installments over three months: first, an initial token payment, 10% of the total transfer size; then, a first “lump sum” (LS1), 45% of the total; finally, a second lump sum (LS2), the final 45% of the transfer. All independent households living in the target villages received transfers, as poverty levels were considered too high to warrant the implementation of eligibility criteria.

Transfers were delivered through the MTN mobile money payments platform. Through previous experience in Uganda, we have found mobile money to be the most efficient and effective way of delivering cash to households in extreme poverty. In feasibility studies and market assessments, however, a recommendation to use mobile money usually has to meet a higher bar of existing infrastructure than other delivery methods (such as banks), because the process of converting digital money to cash relies heavily on local businesses acting as mobile money agents. In section 2.1 we discuss one such report. This project therefore also presents evidence on how well mobile money responds to considerable increases in the demand for liquidity in remote areas.

1.4. Data collection

The table below outlines what data was used to inform this report, how it was collected, when and by whom.

Data	When collected	How collected	Who collected
Operational data <i>Data relating to field team performance</i>	Throughout the program.	Using GiveDirectly performance and data-management software.	GiveDirectly field management team.
Budget data <i>Financial reporting</i>	Throughout the program.	Budgeting software.	GiveDirectly finance team.
Recipient data <i>Recipient reported data related to: user-experience (such as receipt and withdrawal of transfers), life before and after transfers, and data related to transfer spending.</i>	User-experience: throughout the program, during enrollment and after each payment. Self-reported impact: at the end of the program.	In-person and recorded on smartphone-enabled survey software.	GiveDirectly field team.
Mobile money agent surveys <i>Experience as reported by MTN mobile money agents</i>	At the end of the program.	One-to-one interviews.	GiveDirectly field team.

It should be noted that this is not an experimental study of impact and is not compared against a counterfactual or control group, but is instead a report of experience as recorded by GiveDirectly and recipients. We discuss limitations of this analysis in section 4.2, as well as where future research on remote cash transfers might be directed as a result.

2. Operating in a remote and operationally challenging environment.

2.1 Location selection: the challenges of Uganda's remote north

Uganda's north includes some of the most remote and challenging areas of the country, as well as people of the greatest need. The region still bears the scars of the protracted civil war between the Government of Uganda and Joseph Kony's 'Lord's Resistance Army,' which ended in 2006. As recently as 2015, the UNDP's Uganda Human Development Report described the region as "an eyesore in Uganda's relatively impressive national human development record."¹⁴

It is in one of the hardest-to-reach parts of this region that GiveDirectly chose to work. We enrolled recipients in seven villages in the remote Pawach Parish in Uganda's most northerly district, Lamwo. Two of the villages are perched high in the Agoro mountains that mark the border between Uganda and South Sudan. This was one of the worst affected areas in the long years of civil war, and the two villages are still accessible only on foot: a four-hour and six-hour walk from the nearest road, respectively.

The operational context here was challenging in other ways as well:

The area is sparsely populated, making it difficult and expensive for organisations to reach recipients and intervene at scale. Population density in the district is just 24 per km², seven times below the national average. In the area we operated, we estimate population density was considerably lower.

Financial services coverage is minimal, making it hard to deliver transfers to recipients. Just one bank exists in the district of Lamwo, an area of over 5,500km². 24 mobile money agents span the entire district, averaging just one per 233km². In Agoro sub-county, in which Pawach Parish is a smaller administrative unit (see map below), there is just one mobile money agent and no banks. 94% of recipients did not hold a bank account or a mobile money account prior to the program; just 15% had ever owned a phone. Mobile network connectivity in the area ranges from limited to non-existent.

Recipients live considerable distances from the nearest major town, making access to market centres difficult and expensive. The local major town, Kitgum (pop. ~62,000¹⁵), is 55km from the nearest recipient village. Households living in the remotest, mountainous villages are 70km from Kitgum *after* completing the four- to six-hour hike mentioned above.

While there were nine small, local shops in the village at the beginning of the program, these catered to little more than immediate needs; most shopping is done at a travelling market in the local trading centre which visits the sub-county monthly. This is, on average, 25km away from our recipients. One indicator of this isolation: 55% of recipients reported to GiveDirectly that they left their village monthly or less. This number rose to 71% for recipients living in the two remotest mountain-top villages.

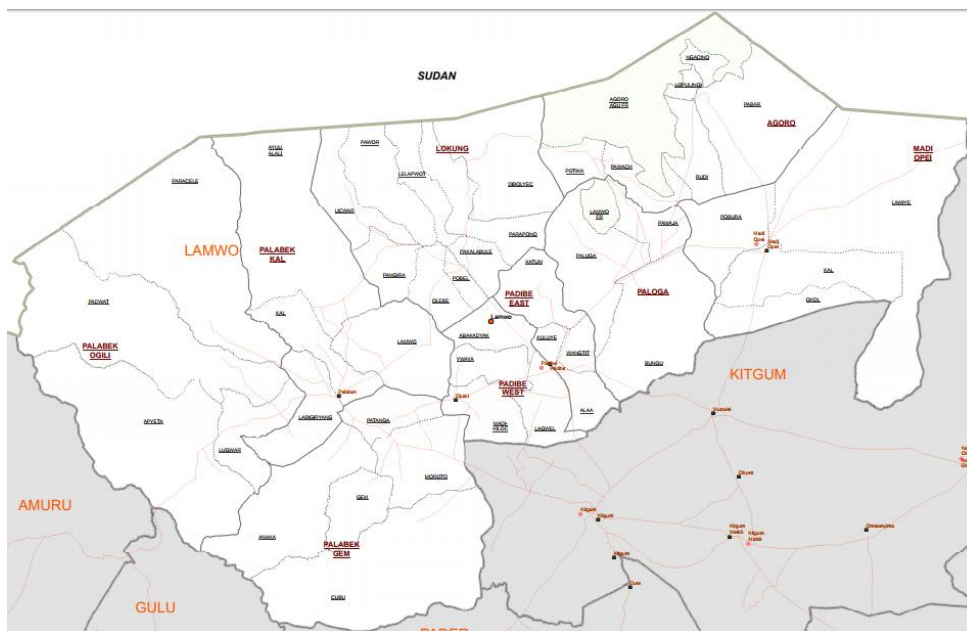
¹⁴ UNDP, "Uganda Human Development Report", 2015, http://www.ug.undp.org/content/uganda/en/home/library/human_development/UgandaHumanDevelopmentReportHDR2015.html

¹⁵ Uganda 2014 Census, <http://citypopulation.de/Uganda-Cities.html>

Unsurprisingly, the area is underserved by both the non-profit and formal private sectors. 91% of recipients had never encountered an NGO prior to GiveDirectly, in spite of the relatively high number working across Northern Uganda in the aftermath of the war; 45% reported being actively involved in a barter economy, with 26% of all recipients bartering more than using cash.

Given the above, the area would be highly unlikely to pass what is called a ‘market-readiness assessment’ – usually a prerequisite for any implementing organisation to sign-off on a cash transfer program – which tend to focus on access to and competitiveness in local markets, availability of certain goods, and access to financial services.

A 2015 WFP commissioned assessment of the feasibility of introducing cash transfers into four Ugandan refugee settlements presents an interesting point of comparison. Here, the authors recommend against delivering cash to one settlement, deeming local markets not robust enough and the financial services infrastructure too limited. This, in spite of access to financial services and markets, as well as existing ownership of mobile phones and mobile money accounts, all considerably more conducive than what we encountered in the Remote Payments Project. Just one settlement was considered appropriate for mobile money based transfers – even then, only as an additional and optional mode of delivering cash.¹⁶



A map of Lamwo District: Agoro Sub-County occupies the most northerly-point; Pawach Parish is marked on this map occupying the southern-tip of Agoro, although two of the villages visited by GiveDirectly are in fact located within the area marked “Agoro” at the northern tip of the Sub-County, marked with diagonal lines to indicate that it is designated a “forest reserve”.¹⁷

¹⁶ WFP, “Uganda - Assessment of the Feasibility of Cash Transfer in Selected Refugee Settlements”, 2015, <https://www.wfp.org/content/uganda-assessment-feasibility-cash-transfer-selected-refugee-settlements-june-2015>

¹⁷ Relief Web, 2010, <http://reliefweb.int/sites/reliefweb.int/files/resources/A850D57AB05E582C85257753005A631E-map.pdf>

2.2. Operational Model: the GiveDirectly “Remote Payments” program

The operational challenges presented by our choice of location forced slight changes to the typical GiveDirectly delivery model. This table shows some of the challenges our location created and the corresponding adaptations.

Process	Challenges	Impact on model
1. Community and local government engagement <ul style="list-style-type: none"> GD seek approval of District leadership Local leaders mobilise community for meetings GD conduct community meetings in each village 	NA	NA
2. Enrolment of eligible recipients <ul style="list-style-type: none"> All households visited at least twice pre-transfers Eligible households enrolled in program Phones distributed at cost of 70,000 UGX (~20 USD) 	Inaccessibility of location	Considerable reduction in field team productivity, with team estimated to have operated at 27% of the productivity of other campaigns in Uganda.
3. SIM card and mobile money registration <ul style="list-style-type: none"> Recipients are registered with mobile money accounts GiveDirectly and MTN conduct mobile money training and safety education 		Registration sessions held at central locations within the parish, at points with a relatively consistent and stable internet location. Prior to transfers, GiveDirectly held village-wide meetings, to confirm that recipients had managed to enrol with mobile money effectively in spite of connectivity issues.
4. Delivery of transfers <ul style="list-style-type: none"> Transfers sent to eligible households through mobile payments technology Transfers sent in three instalments: <ul style="list-style-type: none"> Token = 10% of total transfer Lump Sum 1 = 45% of total transfer Lump Sum 2 = 45% of total transfer 	High poverty levels in area of operation Poor cell connectivity in villages	Decision taken to enrol all households in our area of operation. This resulted in over-enrolment against target number of households (555 vs. 500) and a commensurate reduction in transfer sizes (3.4m UGX vs. 3.1m UGX).
5. Collection of transfers <ul style="list-style-type: none"> Recipients collect transfers from agents in local area 	Low liquidity amongst agents and minimal access to financial service providers in district	GiveDirectly: <ul style="list-style-type: none"> Provided times and dates to MTN representatives MTN: <ul style="list-style-type: none"> Engaged local agents and encouraged agents to travel to recipient villages to “cash-out”
6. Follow-Up <ul style="list-style-type: none"> Recipients contacted after each transfer to ensure that transfers received and safely collected 	Poor cell connectivity in villages	<ul style="list-style-type: none"> Follow-up engagement usually conducted from the GiveDirectly call-centre, based at country head office. Here, follow up was conducted “in-field” by GiveDirectly field officers. This contributed to the field team operating at 27% of other teams’ productivity.

3. Results:

Our results are separated into three sections, mirroring the questions posed in the introduction.

3.1 Is it feasible to deliver cash to remote locations?

3.1.1 Yes. Cash can be delivered to recipients, safely and securely, using mobile money.

GiveDirectly successfully enrolled 555 recipients in the Remote Payments Project, delivering phones to 554 recipients and registering all households on mobile money. 99.6% of 1,665 attempted transfers were successfully delivered to recipients.

Loss of transfers to adverse events was low. We found no instances of bribes. Isolated cases of theft totalled just 0.4% of all transfers, below the GiveDirectly operational quality target applied across all campaigns (<0.5%).

3.1.2 In spite of concerns around liquidity, recipients were able to collect their transfers.

GiveDirectly asked recipients about their experience collecting their transfers after each of the 1,665 transfers were sent. In 90.7% of cases, recipients reported doing so without experiencing issues collecting. In 3.2% of cases, recipients reported collecting transfers but experiencing issues doing so. In a further 2.4% of cases, recipients could not collect their transfers when they first attempted to. For the majority (82%) of the recipients who

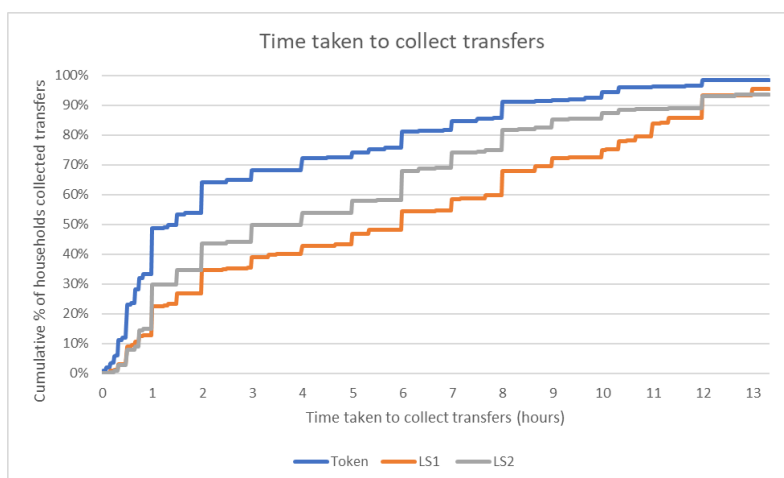
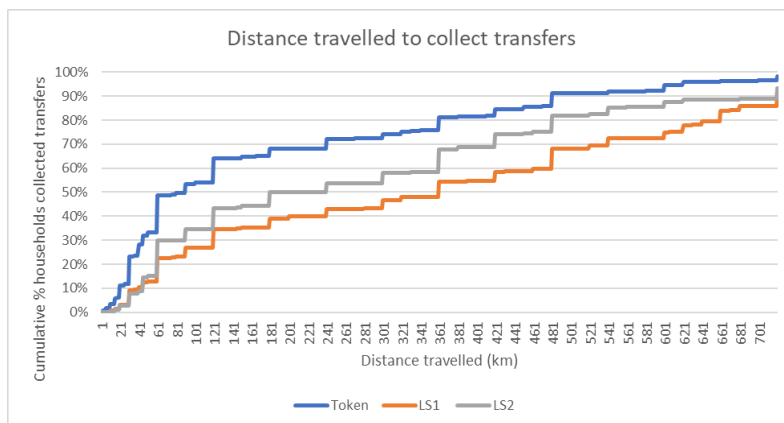
reported having issues collecting, the cause was that local agents did not have enough money on-hand to immediately cash them out.

3.1.3 50% of recipients were able to collect their transfers from agents who travelled to their villages. The remaining 50% often travelled considerable distances to cash out.

Ahead of transfers, GiveDirectly communicated payment sizes and dates to MTN, the telecom and mobile payment provider. MTN engaged two local mobile money agents, based in Kitgum, who were able to offer more liquidity than local agents and travelled to recipient villages to cash out beneficiaries. 50% of recipients were able to collect cash a relatively short distance from their homes, likely cashing out with these Kitgum-based agents.

The remaining recipients often travelled considerable distances to cash out with other agents. 30% of transfers were collected from the nearest major town, Kitgum, some 55-70km from recipients' homes. 22 transfers, around 1% of the total, were collected from Lira, a town 180km away from the nearest recipient village.

After the initial token payment, transfers increased in size and the pressure on agent liquidity increased. This resulted in recipients travelling further and cashing out more slowly at LS1. However, at LS2, we see a decrease in both distance travelled and time taken for most recipients to cash-out. This could be illustrative of the responsiveness of the network of mobile money agents to increases in demand.



3.1.4 Where liquidity constraints made local collection of transfers impossible, some recipients and local traders found mutually beneficial ways to convert digital money into cash, bypassing formal mobile money agents.

The process of turning mobile money balance into physical cash, or “cashing out,” involves sending mobile money credit to a registered mobile money agent. The telecom automatically deducts a withdrawal fee, and the agent pays the difference out in cash to the recipient. (In GiveDirectly campaigns, the withdrawal fee is covered by GiveDirectly.)

In the Remote Payments Project, field staff witnessed recipients bypassing this system by instead sending their digital money to a local trader, not a mobile money agent, and setting a ‘fee’ between themselves and the trader, who would then pay the recipient the remainder of their transfer in physical cash. After this, the trader would then himself travel to a mobile money agent and withdraw the cash there.

The trader’s profit was the difference between the fee negotiated with the recipient and the mobile money agent’s fee, set by the service provider. GiveDirectly field staff reported that the informal fee set for these transactions was 50,000 UGX (~14 USD). This is ~30,000 UGX higher than the MTN defined transaction fee.

However, we should consider in our calculation that this trader would likely be saving the recipient a journey to the nearest major town, most likely over 50km away, costing both time and approximately 30,000 UGX in public transport. The trader would minimise this cost by collecting a number of recipient’s transfers before travelling to the nearest mobile money agent; or simply waiting until a local agent was next able to cash them out. Given this, the value to both parties becomes more obvious.

While we don’t have a clear picture of how many recipients took this non-traditional route to collect transfers, it provides an interesting example of how informal markets can bridge the gap between recipients and liquidity, and how mobile money creates both incentives for this to take place as well as a safe way for it to do so.

3.1.5 The intervention was delivered at 71.5% efficiency; if enacted at scale, we estimate that it could deliver efficiency rates of above 80%. While this is lower than other GiveDirectly campaigns delivered in the same period, it is considerably higher than the efficiency for in-kind interventions.

Efficiency at GiveDirectly is calculated according to a simple formula:

$$\frac{\text{Total transfer budget}}{\text{Total program budget}}$$

Recorded efficiency on the Remote Payments Project was 71.5%. This means that 71.5 cents of every dollar donated reached the hands of a recipient. This is twice as efficient as the

benchmark cost of delivering food aid, as reported in the 2011 Somalia study cited in the introduction to this report¹⁸.

However, it is also ~18% below the efficiency of GiveDirectly's core campaign in Uganda in 2016. Some of this decreased efficiency is driven by the operational challenges of working in a remote area – specifically, by the productivity reductions that result primarily from field officers needing to travel further to reach each recipient household. However, we believe that much of the 18% difference was in fact largely driven by these other factors:

- Due to budgetary constraints, GiveDirectly delivered smaller transfers to each recipient (91% of the regular Ugandan transfer size). This reduces the numerator proportionally more than the denominator in the formula above, and so efficiency falls.
- The program incurred additional senior management time, especially in the design and evaluation of the program. These would not be required if operating at scale post-launch.
- The evaluation for this pilot required additional data collection at the end of the program, with surveys conducted with recipients and local traders.

Estimated, at scale

At scale, we believe the difference in efficiency between remote and non-remote areas is driven solely by the reduction in productivity that results from operating in a remote area. After all, the cost of sending money – when using an organic network of mobile money agents and not contracting a single agent – is no different in remote and non-remote areas. The sender, GiveDirectly, pays the same fees to MTN; the recipient, our beneficiary, still pays the same fee to the local mobile money agent (in fact, paid for by GiveDirectly).

To estimate what a remote program at scale would cost, therefore, we must apply the reduction in productivity (which is considerable, estimated to be a 73.5% reduction in field team efficiency) to a larger budget. To do so here, we take the campaign budget for the core Ugandan operation, a 10m USD program. The result of applying our lower productivity to this is a remote campaign that, we estimate, would operate at efficiency of 81.7%, if reaching the same number of recipients as the core Ugandan program, with a total budget of 11m USD. While this is a reduction of 8.2% when compared against the core operation, it is approximately 2.3x more efficient than the reported efficiency for in-kind aid noted in the introduction to this report.

The reported budget for the Remote Payments Project, the core Ugandan campaign in 2016, and our estimated scaled Remote Payments Project are below.

¹⁸ Overseas Development Institute, 2016

Remote Payments Project budget -- as recorded	
Item	USD
Transfers received by recipients	486,890.60
Staff salaries	74,583.41
Daily allowances for field staff	19,646.81
Software and data management	14,931.23
Field team telco costs	1,062.60
Travel	4,922.57
Field office rent	689.87
Field team supplies	1,336.89
Field team equipment	4,315.75
Mobile money and banking fees	3,390.61
Allocation of GiveDirectly head office costs	5,656.96
Allocation of global management costs	29,491.51
Allocation of Uganda head-office costs	13,449.49
Allocation of East Africa-wide field management costs	20,396.41
Total expense	680,764.71
Efficiency	71.5%

Uganda Core Campaign 2016 and est. scale Remote Payments Project			
New budget	Core campaign	Remote	Rationale for change
Transfers received by recipients	8,945,762	8,945,762	na
Staff salaries	192,305	725,037	Increase proportional to reduction in field team productivity
Professional and service fees	436	436	na
Daily allowances for field staff	71,879	294,827	Increase proportional to reduction in field team productivity
Software and data management	91,437	91,437	na
Field team telco costs	7,007	26,418	Increase proportional to reduction in field team productivity
Travel	4,219	8,437	Cost relates to office-based staff, doubled to account for increased cost of field visits
Field office rent	741	741	na
Field team supplies	6,913	26,063	Increase proportional to reduction in field team productivity
Field team equipment	3,154	3,154	na
Mobile money and banking fees	112,219	112,219	na
Depreciation of assets	547	547	na
FX trade gain/loss	-	143,472	GiveDirectly converted FX significantly better than the initial accounting benchmark, but would not depend on reproducing this, and so remove
Allocations	660,361	716,799	Increase proportional to overall increase in program budget
Total expense	9,953,507	10,951,876	
Efficiency	89.9%	81.7%	

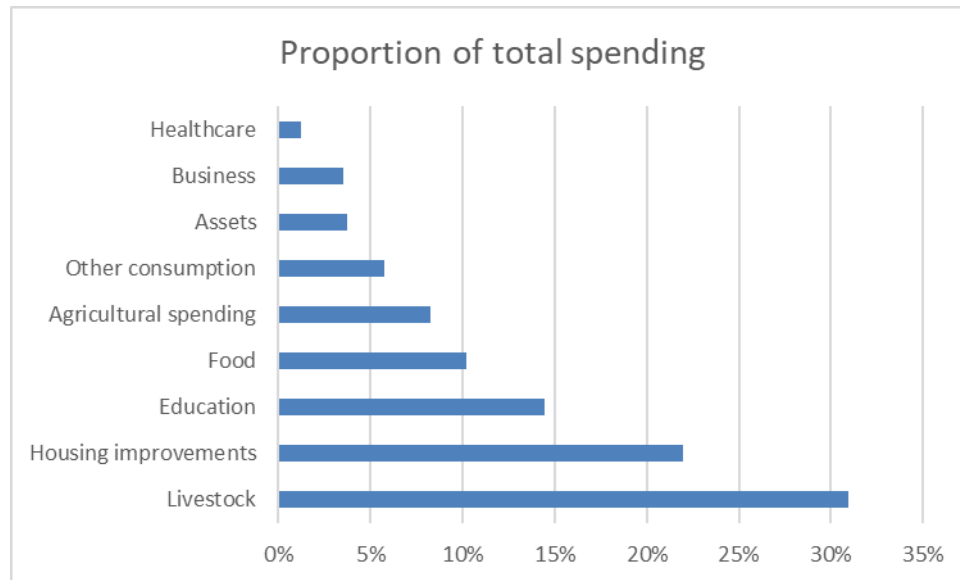
3.2. What is the experience of individuals, families and communities who receive the transfers?

3.2.1 Recipients travelled considerable distances to spend the majority of their transfers – likely seeking markets where higher value goods, such as livestock or building materials, could be purchased.

To spend their transfers, recipients told us that the total return journey was an average of 277km over 17 hours. We know that 45% of recipients travelled to the large markets at Lira, 180km from the nearest village; 23% to Kitgum, 55km away; 11% to Kabermaido, 271km away. Each of these locations is known in the region for their large livestock markets, likely the dominant factor behind these journeys.

3.2.2 Recipients spent their transfers with the same diversity we have witnessed from previous GiveDirectly recipients: a balanced portfolio of short, medium, and long-term investments.

A subset of 401 recipient purchases is summarised in the table below.



While it is impossible to infer impact solely from spending decisions, some possible implied rationale is presented below.

31% of purchases were livestock. A recent cost benefit analysis, carried out by the Red Cross in Rwanda, presents the strong, long-term commercial case for this investment. Cows and pigs in particular are highlighted for their considerable benefit-to-cost ratios of 6 and 4.8, respectively.¹⁹

22% of purchases were spent on improving housing. These provide obvious and immediate welfare improvements, whether a roof over a family’s head, or a mattress that means they no longer sleep on a hard floor. However, they can also provide a less obvious return on investment. GiveDirectly has previously explained the rationale behind the purchase of an iron roof: such a roof can save a family \$100-150 per year in reduced maintenance costs (since thatch-roof homes are expensive to maintain), as well as offer the potential for cleaner drinking water, improvements in productivity, and even a reduction in malaria risk.²⁰ 42% of households who invested in improving their homesteads invested in new roofing.

The third and fourth most popular purchases sit at the extreme ends of the short and long-term impact spectrum: on the one hand, education (14% of recorded spending) is a decidedly long-term investment; on the other, spending on food for immediate consumption (10% of recorded spending) delivers on the most immediate and pressing

¹⁹ ICRC, “Cost Benefit Analysis of the Rwanda Red Cross Livestock Rotation Programme”, 2015, <https://www.google.com/search?q=cost+benefit+analysis+livestock+red+cross&oq=cost+benefit+analysis+livestock+red+cross&aqs=chrome..69l57.4606j0j7&sourceid=chrome&ie=UTF-8#>

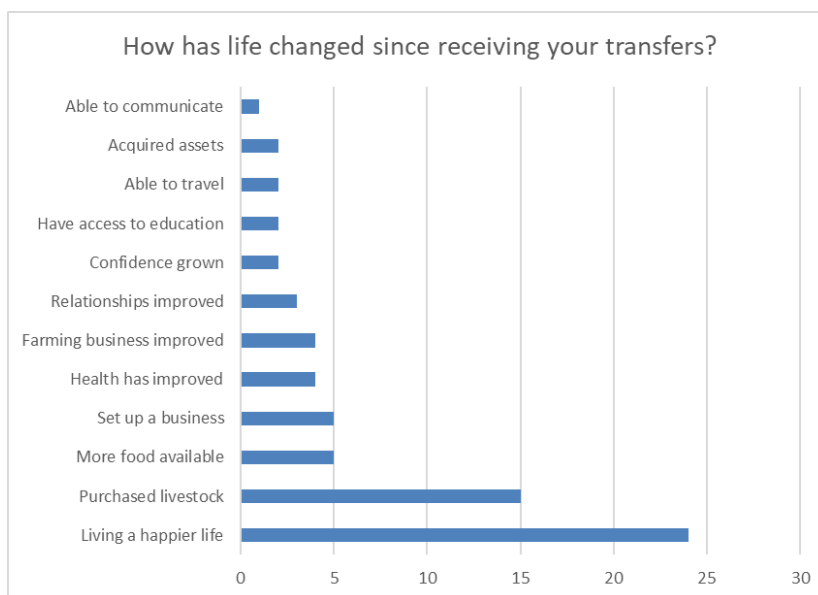
²⁰ Faye, M. GiveDirectly blog: “Metal Roofs - A Lesson from the True Poverty Experts”, 2013. <https://www.givedirectly.org/blog-post.html?id=2845341784910255488>

needs (although one might well add the long-term benefits of improved health that result from improved nutrition), likely driven at least in part by the poor harvests and widespread droughts that had a devastating impact across much of East Africa and the surrounding region during this period.

99.4% of recipients told GiveDirectly that they had no regrets about their purchases.

3.2.3 Recipients reported life-changing impact in the weeks after the final transfers.

A subset of recipients was asked if and how life had changed since receiving their transfers. The chart below shows their responses, with most noting a general sense of improved wellbeing and happiness at the opportunity to invest freely, as well as improvements in their health and relationships with other members of their household.



3.3. What is the wider impact of cash on both local markets and financial service providers in remote areas?

3.3.1 We saw evidence of increases in financial inclusion, both amongst recipients and non-recipients.

There was evidence of considerable increases in use of mobile money amongst recipients and non-recipients.

While two relatively large local mobile money agents travelled to recipient villages and delivered 50% of the liquidity required to cash-out recipients, the impact appears not to have been limited to these agents. Although seven of the 11 local agents reported that they struggled to provide liquidity, they collectively estimated that they cashed out GiveDirectly recipients on 228 occasions.

Moreover, the impact on the mobile money economy appears not to have been limited to recipients. The same agents reported that after GiveDirectly’s transfers were sent, weekly transactions grew by 51%, from a total of 1,745 to 2,640. Even excluding the 228 occasions

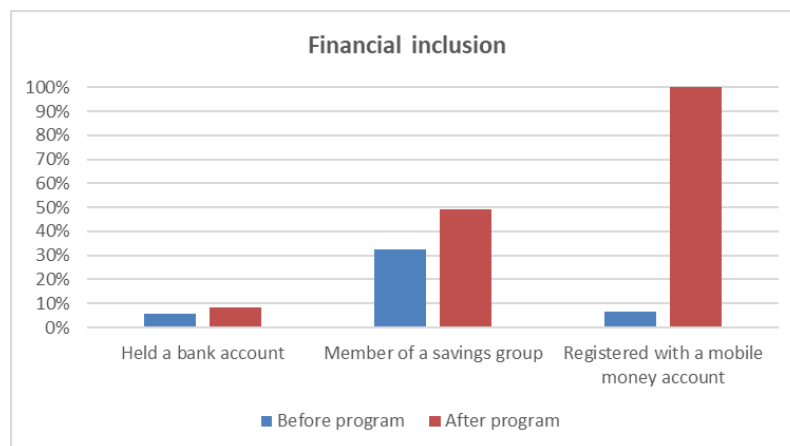
in which GiveDirectly recipients collected transfers, this is a considerable increase in mobile money activity in the area, possibly suggestive of a positive multiplier in the surrounding economy.

This would be in keeping with recent studies of the economic multipliers experienced by non-recipient, neighbouring communities, resulting from cash transfer programs, such as those experienced following cash transfer interventions targeting refugees in Uganda and Rwanda.²¹

Recipients themselves suggested that the use of mobile money is likely to become a part of their everyday behaviour: 99.8% told our field staff that they intended to keep using it after the transfers ended.

From a small base, use of traditional financial services grew rapidly, as did involvement in local savings groups.

Prior to the program, just 4% of recipients held a bank account. By the end of the program, this number had grown to 6% of all recipients. Use of local savings groups, a common and informal way of saving, also grew. At the beginning of the program, 32% of recipients were members of a savings group; by the end of the program, 49% were.



3.3.2 Existing traders in the local area reported benefiting from the program, and appeared able to increase both the variety and quantity of stock. The area also saw considerable growth in the number of local businesses operating.

Prior to the program, nine small shops were recorded by GiveDirectly field staff in the seven recipient villages. By the end of the program, 40 shops were reported. The supply of these shops did not seem to outstrip demand for their services: existing shops in the villages reported a surge in demand for a wide range of products.

Illustrative evidence suggests that supply was, at least to a certain degree, able to respond to the rapid increase in demand. 66% of recipients reported seeing more of the usual food,

²¹ Taylor et al, "Economic impact of refugees", 2016, <http://www.pnas.org/content/113/27/7449.full>

goods, and other products they were used to seeing at local markets. A further 66% reported seeing a greater diversity of items at local markets than were previously available. Human capital also appeared responsive to increased demand: 86% of recipients reported that there were more services on offer at local markets after the transfers.

While the majority of recipients were able to use their transfers to purchase the items they wanted, 12% of recipients reported that they were unable to purchase an item due to low availability of stock. This could suggest that, albeit in a relatively small number of cases, supply of some products failed to keep pace with demand.

3.3.3 Recipients reported price rises across a range of goods: the duration of this effect and precise causality would require further, more robust analysis.

The literature around the impact of cash transfers on prices in local markets shows that, in non-remote settings, we do not usually see significant price rises. A report carried out by UNICEF noted that in six such studies, no inflation was detected.²²

This is in contrast to evidence that suggests that the implementation of “in-kind” support, such as food, can lead to a deflationary effect on local prices, with potential negative impact on local traders and food producers, as witnessed in a comparative study of cash transfers and in-kind support in Mexico.²³

However, in remote settings, there is evidence that cash transfers can cause price increases. The Mexico study noted above, which documented price deflation after the delivery of in-kind aid, also saw sustained price increases in remote areas following a cash transfer program. In this study, however, recipients were receiving regular cash transfers, not a one-off injection of capital, which might have been the cause of this sustained inflationary impact.

A closer point of comparison to the Remote Payments Project, therefore, is a non-experimental analysis of prices conducted after one-off transfers to remote areas in 2010, a model similar to GiveDirectly’s and also one implemented in Northern Uganda. Here, inflation occurred once more, but this time with prices returning to pre-transfer levels within two weeks. These price rises were also evident only at small, local markets and not at medium-sized markets or larger, regional hubs (where we have seen that many of our recipients spent their transfers).²⁴

In the Remote Payments Project, GiveDirectly asked recipients to report whether they witnessed price rises for goods, and to spontaneously recall which goods they had seen price rises for. For a few staple goods, over 10% of beneficiaries reported price rises (namely: sorghum, reported by 66% of recipients; soap, reported by 33%; salt, reported by 19%; sugar, reported by 16%; and maize, reported by 14%). The magnitude of the price rises

²² UNICEF, “Myth-busting? Confronting Six Common Perceptions about Unconditional Cash Transfers as a Poverty Reduction Strategy in Africa”, <https://www.unicef-irc.org/publications/pdf/IWP-2017-06.pdf>

²³ Cunha, Jesse M.; De Giorgi, Giacomo; Jayachandran, Seema (2015): “The price effects of cash versus in-kind transfers”, <https://www.econstor.eu/bitstream/10419/120806/1/832778362.pdf>

²⁴ Creti, P, “A case study of unstructured markets in Northern Uganda”, 2010, <http://www.cashlearning.org/downloads/resources/calp/impact-of-cash-transfers-on-local-markets-text-only.pdf>

for these goods (among those who reported witnessing changes) varied considerably, from 24% for soap to 75% for sorghum – see the table below for further details.

It should be noted that this is a very rudimentary approach to capturing price changes – more accurate measures would be obtained through market surveys, beyond the scope of the present evaluation, and as mentioned later in this report, robust measures of price changes should be a core component of future experimental research on delivering cash to remote locations.

Product	Proportion reporting price change	Magnitude of price change (+)
Sorghum	66%	74%
Soap	33%	24%
Salt	19%	38%
Beans	17%	71%
Sugar	16%	40%
Maize	14%	47%

A mitigation to the potentially negative externalities of price rises on non-recipients would be to extend eligibility criteria in order to enroll all households within a given community, especially when operating in remote areas where poverty levels are uniformly high. This would minimise the number of non-recipients adversely affected by price rises. This was the approach followed by GiveDirectly in the Remote Payments Project, and is one that has recently been proposed by the authors of a paper specifically examining the spillovers of a cash transfer intervention on the nutrition amongst non-beneficiaries.²⁵

4. Conclusions.

4.1 The implementation of cash transfers in remote areas

Cash can efficiently be safely and securely delivered to remote recipients.

We present evidence that cash can be delivered to remote recipients in challenging environments. While many recipients had to travel considerable distances to collect their transfers, or seek creative ways of doing so, mobile money agents in the region were able to ‘cash-out’ project recipients and provide considerable liquidity when required.

Mobile money proved to be an effective tool for delivering cash to recipients in remote environments. Barriers to recipients being signed up with mobile money services were low. Networks of local agents were responsive to demand and spread the risk of using a single, contracted partner.

Peer-to-peer digital transfers presented recipients with clever ways to safely bypass the traditional cash-out process. By delivering cash through mobile money, we may also have

²⁵ Filmer et al, "Local Spillovers from Cash Transfer Programs: Food Price Increases and Nutrition Impacts on Non-beneficiary Children", 2016, https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CSAE2017&paper_id=306

had the positive externality of keeping more of the economic multiplier within the local community and economy.

We present evidence that delivering cash transfers to remote places is considerably more efficient than seeking to deliver in-kind aid. While delivering cash to remote areas does incur additional operational costs relative to less remote areas, we estimate that an organisation could deliver efficiency above 80% when working at scale – a strong benchmark of efficiency in any operational environment.

Recipients, communities, markets, and financial service providers appear to benefit from a large injection of cash into a remote area.

We present evidence that delivering cash to remote areas drives more vibrant commercial activity in the surrounding community. While we cannot draw causality from such a small study with no comparison group, improvements seen in the provision of financial services, recipients' financial inclusion, the supply of goods, produce and services at local markets, and the arrival of new businesses and traders could result from the considerable injection of capital GiveDirectly made in the area.

We find recipients spending their transfers on a variety of goods and services that could benefit themselves and their families, suggesting that the considerable benefits that cash has provided to needy recipients in other parts of the world would be replicated in remote locations.

Price rises were witnessed by recipients, however. A comparable study suggests that these could have been short-lived and localised, but even their short-term presence could present a case to implementing organisations to consider universal eligibility (enrolling all households within a given geography) when operating in remote areas, where poverty levels are often uniformly high.

Remoteness, weak markets, and poor provision of financial services are seen as a barrier to cash transfers. The Remote Payments Project suggests that cash can be delivered in even the most challenging environments.

This report also presents illustrative data on the impact of cash in such settings. The data suggests that the impact can be transformative, not only for individuals, but also for the readiness of local markets to provide for them.

With regard to the latter, the Remote Payments Project inverts the established thinking around the ability of markets to cope with and thrive after a large injection of capital. We suggest that avoiding sending cash to remote areas with underdeveloped markets may starve them of exactly what they need to begin a transformation. Rather than look at a remote location and ask: "In its current state, is this location ready for a large injection of cash?" we suggest organisations ask themselves: "How could cash transform this location, its economy, and community?"

4.2 Limitations

This report and evaluation was not based on experimental evidence, and causality cannot be attributed. Evidence is directional and indicative, based on recipient surveys at endline, not against a counterfactual or control group. There are undoubtedly benefits to more experimental analysis of working in remote areas, outside of the budget of a program this small.

We would hope, for instance, to see more rigorous analysis on the question of localised inflation raised in section 3.4.3 – specifically on its magnitude, how widespread it is, and whether it is sustained or short-lived. We also believe the suggestive evidence of economic benefits within the local economy, such as the improved supply of products and services and increased financial inclusion, warrant further, experimental study.

4.3 External validity

Uganda's remote north has been at peace for over ten years, and while the economic scars of the long civil war remain, the area is largely peaceful. The Remote Payments Project therefore does not purport to deliver external validity to areas where remoteness is paired with other operational challenges such as crisis, conflict, or a resultant total market failure.

There are also certain unique elements to GiveDirectly's program that limit the external validity of this report. Other organisations may send smaller transfers than those of a GiveDirectly grant. Equally, the universal targeting approach used in this program, which results in a high concentration of recipients in a single area, may not be applicable to all implementers. The combination of these two factors aligns incentives in a way that presents businesses and financial service providers with a compelling commercial case to serve the recipients. Had we sent considerably smaller transfers, or sent transfers to a smaller proportion of beneficiaries, the results may have been different, as the financial incentives for traders and mobile money agents would likely have been reduced. Further evaluation of smaller transfers to sub-sections of the community would be required to validate this reasoning.