Comparing Cash and Mobile Transfers in Niger

Researchers:

Jenny Aker

Rachid Boumnijel

Amanda McClelland

Niall Tierney

Sector(s): Finance, Gender, Political Economy and Governance, Social Protection

Location: Niger

Sample: 96 villages

Target group: Rural population

Outcome of interest: Empowerment Social service delivery Women's/girls' decision-making Food security

Intervention type: Cash transfers Digital and mobile Unconditional cash transfers

AEA RCT registration number: AEARCTR-0001586

Partner organization(s): Concern Worldwide

Mobile phone-based money transfer systems could provide a cheaper alternative to traditional distribution systems for cash transfers, reducing costs and leakages. In partnership with Concern Worldwide, researchers examined the relative effectiveness of traditional versus mobile cash transfers in Niger. Households who received electronic transfers had more diverse diets than those who received traditional cash transfers, in part due to time savings and shifts in women's decision-making power within the household. Mobile transfers were also twenty percent cheaper per transfer to implement than traditional cash transfers. These results suggest that electronic transfers can help address key logistical challenges in implementing anti-poverty programs, provided that an electronic payments infrastructure is in place.

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Conditional and unconditional cash transfers have become an increasingly common component of social protection policies. In high-income countries, such programs are often implemented electronically through bank transfers or pre-paid debit cards. However, in countries with limited financial infrastructure, cash transfer programs often require physically distributing small amounts of cash to rural areas. Mobile phone-based money transfer systems could provide a cheaper alternative by reducing costs and leakages, as well as increasing access for program recipients. However, despite the potential benefits of electronic transfers, there is little rigorous evidence on their effectiveness.

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Niger is one of the poorest countries in the world, with a per capita gross national product of US$430 and an estimated 45 percent of the population living on less than US$2 per day in 2014. Due to high variability in rainfall, Niger also periodically experiences drought and harvest failures, and between 2009 and 2010–around the time of the study–the country had 2.7 million people classified as vulnerable to extreme food insecurity.[1]

This study took place in rural villages where agriculture was the primary source of income. While 29 percent of households owned a mobile phone prior to the start of the program, 61 percent of respondents had used a mobile phone in the few months prior to the initial survey. Most households (98 percent) had experienced drought in the past year, and the average household reported having sufficient food for two out of the past six months.

Women carrying goods through a field.

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In response to a drought and food crisis in Niger from 2009-2010, Concern Worldwide provided unconditional cash transfers to approximately 10,000 drought-affected households during the “hungry season,” the five-month period before the harvest. Researchers partnered with Concern Worldwide to examine the relative effectiveness and cost-effectiveness of different delivery methods. Researchers randomly assigned 96 eligible villages into one of three groups, and all transfers were provided to the woman within the household:

- Traditional cash transfer: Households in this group received an unconditional cash transfer of CFA 22,000 per month (US$45) over a five-month period. Concern Worldwide transported cash in armored vehicles to distribution centers and then distributed cash in envelopes to individual households. Similar to other poverty programs in Niger, program recipients traveled to a designated distribution center on a specific day to receive their transfer.

- Mobile transfer: Households in this group received an unconditional cash transfer of the same amount through their mobile phone. Because less than 30 percent of households in the region owned mobile phone, households also received mobile phones equipped with a mobile money account and training on how to use the technology. On the day of the cash transfer, program recipients received a message with a special “beep” to notify them that the transfer had arrived. Program recipients could then take their mobile phone to a local agent to “cash out” their electronic money for cash.
- Cash transfer + mobile phone: To disentangle the impact of mobile money transfers from that of receiving a mobile phone, a third group of households received traditional cash transfers plus a mobile phone enabled for mobile-money and training on how to use it.

Due to the humanitarian nature of the intervention and the political situation at the time, researchers did not collect data from a group of households that did not receive any transfers at all. Therefore, researchers could not estimate the causal impact of the cash transfer programs, but rather compared the relative effectiveness of the different delivery methods.

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Households who received mobile transfers had greater diet diversity and their children ate more, likely due to reduced time and travel costs to obtain their transfers, as well as increased decision-making power for women. These results suggest that electronic transfers may address the logistical challenges of implementing cash transfers in low-income countries, but requires sufficient investment in the payments infrastructure.

Improved diet diversity: Households that received mobile transfers used these funds to buy more diverse types of goods and were more likely to purchase protein and energy-rich foods. Households that received the mobile transfers purchased 0.8 more types of food and non-food items than the average of 4 types purchased by households that received cash. In addition to purchasing more diverse goods, households that received electronic transfers also had more diverse diets, in particular, they were more likely to consume beans, fats, and fruits compared to both groups of households that received cash transfers. While children in cash villages ate an average of 3.1 meals a day, children in villages that received mobile transfers ate an additional third of a meal per day. Across all three groups, less than 1 percent of households used the cash transfer for “temptation goods,” defined in this context as sweets and tea.

Time saving and reduced travel: Households that received electronic transfers incurred fewer costs to obtain the transfer. While recipients of cash transfers traveled an average of four kilometers round-trip to obtain their payments, mobile transfer recipients on average traveled two kilometers to “cash out.” Mobile transfers also reduced wait time: participants cashing out mobile money waited an average of 30 minutes, compared to four hours for traditional cash transfers. In total, mobile transfers saved recipients approximately 20 hours over the course of the program, equivalent to 2.5 days’ worth of average agricultural wages (US$3 per day). Electronic transfers provided greater flexibility of when to “cash out” that may have freed up women’s time, for example, to engage in productive agricultural activities. In fact, households that received electronic transfers were more likely to plant two types of cash crops that are primarily grown by women in this context.

Increased women’s decision-making power: Some evidence suggests that mobile money shifted women’s bargaining power within the household. All transfers were provided to women, but mobile money was less observable to other household members, potentially allowing women to temporarily conceal the transfer. Women who received mobile transfers were more likely to travel to weekly markets, be involved in selling household grains, and spend more on children’s clothing than those in the other groups. In addition, their households continued to have more diverse diets six months after the program. Researchers suggest that women who received electronic transfers may have been better able to convince their husbands to spend more on higher quality foods or invest extra effort in finding lower prices for staple foods, therefore freeing up income.

Cost-effectiveness: Although the initial cost of the mobile transfer program was higher due to the purchase of mobile phones, its per-transfer cost was approximately twenty percent lower than that of physical cash distribution. This suggests that, once phones and mobile money agents are in place, mobile transfers could be a simple and low-cost way to deliver transfers.

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1. Famine Early Warning Systems Network (FEWS NET). 2010. *Niger Food Security Outlook 2010*. Washington, DC: FEWS NET.