



Contributions of experimental approaches to development and poverty alleviation: Field experiments and humanitarian assistance

Quattrochi, J., Aker, J. C., van der Windt, P., & Voors, M.

This is a "Post-Print" accepted manuscript, which has been Published in "World Development"

This version is distributed under a non-commercial no derivatives Creative Commons



([CC-BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/)) user license, which permits use, distribution, and reproduction in any medium, provided the original work is properly cited and not used for commercial purposes. Further, the restriction applies that if you remix, transform, or build upon the material, you may not distribute the modified material.

Please cite this publication as follows:

Quattrochi, J., Aker, J. C., van der Windt, P., & Voors, M. (2020). Contributions of experimental approaches to development and poverty alleviation: Field experiments and humanitarian assistance. *World Development*, 127, [104830].
<https://doi.org/10.1016/j.worlddev.2019.104830>

You can download the published version at:

<https://doi.org/10.1016/j.worlddev.2019.104830>

WORLD DEVELOPMENT SYMPOSIUM

Contributions of Experimental Approaches to Development and Poverty Alleviation

Field Experiments and Humanitarian Assistance

John Quattrochi

Department of Public Health
Simmons University
300 The Fenway
Boston, USA
john.quattrochi@simmons.edu

Jenny C. Aker

The Fletcher School
Tufts University
160 Packard Avenue
Medford, MA
Jenny.Aker@tufts.edu

Peter van der Windt

Division of Social Science
New York University – Abu Dhabi
Saadiyat Island, A5 147
Abu Dhabi, United Arab Emirates
petervanderwindt@nyu.edu

Maarten Voors*

Development Economics Group
Wageningen University and Research
Hollandseweg 1, 6704 AV Wageningen,
the Netherlands
maarten.voors@wur.nl

* Corresponding author

Abstract

The work of Nobel Laureates Banerjee, Duflo and Kremer has centered around the use of randomized control trials to help solve development problems. To date, however, few field experiments have been undertaken to evaluate the effects of humanitarian assistance. The reasons may lie in challenges related to logistics, fragility, security and ethics that often loom large in humanitarian settings. Yet every year, billions of dollars are spent on humanitarian aid, and policymakers are in need of rigorous evidence. In this paper, we reflect on the opportunities and risks of running experiments in humanitarian settings, and provide, as illustration, insights from our experiences with recent field experiments of large-scale humanitarian aid programs in the Democratic Republic of Congo.

Acknowledgements

We thank UNICEF, UN OCHA, Concern Worldwide, the RRMP program and its partners: Mercy Corps, Solidarités International, Norwegian Refugee Council, and Danish Refugee Council. We also thank RISD for data collection and specifically the late Jean Paul Zibika. Funding is gratefully acknowledged from 3IE, JPAL, New York University – Abu Dhabi and Wageningen University.

In 2018 alone, conflicts and disasters around the world left an estimated 206 million people in need of humanitarian assistance (DI, 2019). Persistent conflict and global environmental change – including coastal flooding, rainfall variability and water scarcity – will likely increase the importance of humanitarian assistance in the decades to come. Despite the popularity of experimental studies to explore the impact of development aid, experiments are more rarely used to evaluate the effectiveness of humanitarian assistance. For example, in their review of studies on cash and “near-cash” transfers in emergency settings, Doocy and Tappis (2017) find that just five out of 108 studies have an experimental or quasi-experimental design (Aker 2016, Lehmann and Masterson 2014, Schwab 2019, Aker 2017, Hidrobo et al 2014, see also Puri et al 2017).

Nevertheless, over the past few years, there has been a shift in researcher effort and donor funding towards randomized control trials (RCTs) to evaluate humanitarian assistance. For example, the International Initiative for Impact Evaluation (3ie), with support from the UK’s Department for International Development (DfID) and the US Agency for International Development (USAID), recently have funded several RCTs in emergency settings, including Quattrochi et al (2019). DfID also currently supports Innovations for Poverty Action (IPA) and the Abdul Latif Jameel Poverty Action Lab (J-PAL) to launch programs in fragile contexts (Edwards 2018).

There are compelling reasons to use field experiments to learn about the impact of humanitarian assistance. The large number of people that are affected by emergencies and the considerable effort and sums of money that are spent, necessitate careful study from both an ethical and cost-effectiveness perspective. While observational studies provide valuable information in this regard, they do not necessarily estimate a causal relationship between aid and key outcomes, without strong identifying assumptions. Policymakers want answers to questions about what types of interventions to deliver, how to deliver them, and whether there are positive (or negative) impacts. While some of these answers can be extrapolated from development to humanitarian settings, the two contexts differ in important ways. Thus, while RCTs *can* be used in humanitarian settings, there are particular challenges and opportunities that must be addressed before doing so, as well as modifications to the “typical” RCT design.

This paper illustrates these issues by using insights from two RCTs conducted in one of the world’s largest and most complex humanitarian settings, eastern Democratic Republic of Congo (DRC). In the first study, Aker (2017) collaborated with an international NGO to study the relative effectiveness of cash versus vouchers for internally displaced persons (IDPs). Within an informal IDP camp, households were randomly assigned to receive either cash or a voucher of the same monetary value. While voucher recipients changed their expenditures, there were no differences in food consumption or asset ownership between the two modalities. Because cash was less expensive to provide (and markets were available), the study suggests that, from a cost-effectiveness perspective, cash is the preferred aid modality. In the second study, Quattrochi et al (2019) collaborated with the UN’s Rapid Response to Movements of Population (RRMP) program to assess the impact of vouchers for IDPs and host families. Households were randomly assigned to receive either a voucher for essential household items or no voucher. While the vouchers improved adults’ mental health and had moderate effects on social interaction and resilience, there were no effects on children’s physical health.

Below, we highlight four key challenges for conducting field experiments in humanitarian settings, along with suggestions for future work in this area.

Speed. Much of the effort to undertake RCTs is at the design stage. Obtaining funding, deciding upon the types of interventions and randomization strategy, and collecting data often take months (if not years) of careful planning. However, in emergency settings, things have to move quickly, for a variety of reasons. In Quattrochi et al (2019), for example, there was only a two-week window between the RRMP program's decision to intervene and the distribution of vouchers. In Aker (2017), the funding cycle of the interventions similarly required quick decisions. Despite the urgent nature of assistance, many humanitarian contexts are characterized by their long duration, and aid organizations have often operated in these contexts for years. In eastern DRC, the implementation partners in both studies had been operating in the country for over 20 years, with the necessary infrastructure and staff in place. Thus, while researchers and implementation partners had to move quickly – making rapid decisions about the interventions and randomization design and implementing the study within a one-year period – the existing infrastructure facilitated this process. ***This suggests, RCTs in humanitarian contexts are more likely to succeed when conducted with an existing implementing partner with significant experience in the particular setting.***

Ethics. Conducting any type of research in humanitarian contexts can raise different ethical issues than those found in traditional development contexts (Cronin-Furman and Lake 2018), some of which are specific to RCTs. The key consideration is that of targeting and vulnerability; while many development programs may target the poor, beneficiaries in humanitarian settings are often extremely vulnerable. In such contexts, three typical questions arise. Should research be conducted at all? If so, is an RCT appropriate? And, if yes, should there be a pure control group, i.e., a group without any assistance? Quattrochi et al (2019)'s research design had a pure control group, based upon the fact that the RRMP program was designed to provide aid only to the most vulnerable households within a community. Yet the research team secured *additional* funds to treat additional households in each community, randomly assigning the next-most vulnerable households to vouchers or nothing. Thus, the study exploited the existing approach of the RRMP program. Aker (2017)'s research design, on the other hand, instead assigned households to different types of aid modalities. This was primarily due to the fact that the target population was IDPs without any other source of aid, and hence all households were extremely vulnerable. This modification of research design meant that the research question focused on the relative effectiveness of each modality – rather than the impact of the modality on its own. ***Overall, these examples suggest that the decision to have a pure control group (or none) should be based upon the implementing organization's existing program, as well as the level of vulnerability of the target population.***

Partnerships. Any type of research – and especially an RCT – requires close cooperation between the research team and the implementing organization, in order to build trust, develop a common language and shared goals, and design of the study. A key (and sometimes the most contentious) element is the use of random assignment, as opposed to specific selection criteria. Cooperation can be much more challenging in a humanitarian context, since operations are urgent and unpredictable and high staff turnover may weaken institutional memory and complicate trust-building. Partners may reasonably wonder why research is being conducted, and why a randomized design is being used. In both studies,

several steps were taken to address these challenges. First, the research did not add to the burden of program staff. The studies fit within standard implementation design. Second, Quattrochi et al (2019) hired a dedicated research coordinator to remain in close contact with the two intergovernmental agencies, four international NGOs, and three data collection teams involved in the study. Third, in both cases, the research team built partnerships with organizations, rather than with individuals inside the organizations, and ensured open communications with all parties. ***Especially in humanitarian settings, building close partnerships is essential, and research teams must make sure that the research is not getting in the way of delivering humanitarian aid.***

Data. Data collection is a significant undertaking in any type of RCT, requiring extensive piloting, testing, training and execution. Deciding what questions to ask, how to ask them, of whom and for how long are often key considerations. Humanitarian aid – especially cash transfers and vouchers – can have impacts on a variety of outcomes, thereby making it difficult to focus on a narrow subset of indicators. Yet the uncertain nature of emergencies, as well as the vulnerability of the populations, requires restraint in this regard. In Aker (2017), the research team decided to limit the duration of the survey to about an hour, and used proxy measures for welfare – such as assets and food security – as opposed to a full consumption and expenditure module. In addition, the research asked questions about households’ experiences, but avoided more sensitive questions to avoid invoking traumatic experiences. ***With data collection in humanitarian settings, shorter surveys are often better, with less intrusive questions, and using secondary data is key – when possible.***

As the recent Nobel Prize in economics attests, RCTs have made a tremendous contribution to our understanding of development interventions. While not appropriate in all contexts, there are opportunities to use RCTs in humanitarian settings, as long as researchers understand the special and unique considerations and implications.

References

- Aker, J. C., Boumniel, R., McClelland, A., & Tierney, N. (2016). Payment Mechanisms and Antipoverty Programs: Evidence from a Mobile Money Cash Transfer Experiment in Niger. *Economic Development and Cultural Change*, 65(1), 1–37.
- Aker, J. C. (2017). Comparing Cash and Voucher Transfers in a Humanitarian Context: Evidence from the Democratic Republic of Congo. *World Bank Economic Review*, 31(1), 44–70.
- Cronin-Furman, K., & Lake, M. (2018). Ethics Abroad: Fieldwork in Fragile and Violent Contexts. *PS - Political Science and Politics*, 51(3), 607–614.
- Development Initiatives (2018). *Global Humanitarian Assistance Report 2018*.
- Doocy, S., & Tappis, H. (2017). Cash-Based Approaches in Humanitarian Emergencies: A Systematic Review. *Campbell Systematic Review*.
- Edwards, S. (28 June 2018). DFID-backed RCTs take on 'new frontiers' in fragile countries. Devex. Available: <https://www.devex.com/news/dfid-backed-rcts-take-on-new-frontiers-in-fragile-countries-92952>

Hidrobo, M., Hoddinott, J., Peterman, A., Margolies, A., & Moreira, V. (2014). Cash, Food, or Vouchers? Evidence from a Randomized Experiment in Northern Ecuador. *Journal of Development Economics*, 107, 144–156.

Lehmann, C. and Masterson, D. (2014). *Emergency Economies: The Impact of Cash Assistance in Lebanon. An Impact Evaluation of the 2013-2014 Winter Cash Assistance Program for Syrian Refugees in Lebanon*. New York: International Rescue Committee.

Puri, J., A. Aladysheva, V. Iversen, Y. Ghorpade and T. Brück (2017) Can Rigorous Impact Evaluations Improve Humanitarian Assistance? *Journal of Development Effectiveness*, 9(4), 519-542.

Quattrochi, J., Bisimwa, G., Thompson, T., Van der Windt, P., & Voors, M. (2019). *The Effects of Vouchers for Essential Household Items on Child Health, Mental Health, Resilience, and Social Cohesion among Internally Displaced Persons in the Democratic Republic of Congo*. New Delhi: 3ie.

Schwab, B., 2019. In the Form of Bread? A Randomized Comparison of Cash and Food Transfers in Yemen. *American Journal of Agricultural Economics* 0 (0): 1-23.