Displacement and Development: Evidence from a Graduation Program for Somalia's Ultra-Poor

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Motivation

- The number of internally displaced people is rising rapidly worldwide.
- The majority live in protracted, precarious conditions in low-income countries.
- Humanitarian aid to date has largely focused on short-term relief (cash, food, vouchers), without addressing the underlying drivers of poverty.
- Despite the scale of global displacement, there remains a striking lack of rigorous evidence on the effectiveness of livelihood interventions targeting IDPs (Rozo and Grossman, 2025).

What is this study about?

- Assesses the effects of an ultrapoor graduation program (UPG) rolled out to IDPs in the city of Baidoa in Somalia, host of one of the largest IDP populations in the country (and possibly the world).
- A sample of 4,116 households was randomly assigned to treatment or control, in line with a predetermined fixed limit on the number of eligible households.
- The intervention provided short-term cash support; an asset transfer or technical / vocational training; and savings groups with minimal coaching.
- We tracked households for two years with minimal attrition.

Preview of results

- We find the UPG intervention has large positive effects on the primary outcomes of interest: we observe a 30% increase in total consumption (food and non-food).
- There is also a 300% increase in the value of household assets (primarily goats), and a 50 percentage point increase in the probability of savings.
- These effects seem to be mainly driven by increased income from livestock.
- A generalized random forest analysis reveals that the positive effects are notably larger for households characterized by lower dependency ratios; this pattern is not observed in replication data from graduation programs in other, stable settings.

Intervention and trial design

Overview of UPG

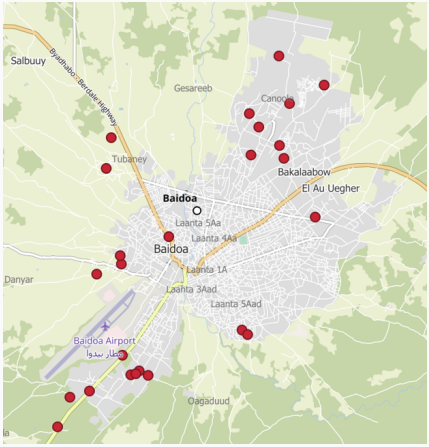
- UPG was implemented by World Vision from 2022 to 2024, with the collaboration of Acted.
- The intervention begins by providing short-term cash support (six monthly instalments of slightly over $100 in 2017 PPP).
- Households then have the choice of receiving a productive asset or engaging in a six-month TVET training course (hairdressing, sewing, building, tie and dye, etc.).
  - Asset transfer is valued around $900 PPP; the dominant asset is goats.
- They participate in savings' groups that served as platforms for financial literacy and business management and receive group-level coaching.

Trial design

- Households were eligible for the intervention if they lived in certain target neighborhoods (predominantly, though not exclusively IDPs) for at least one month and reported at least moderate food insecurity.
- Randomization was conducted at the household level; we surveyed households at baseline (2022), and one (2023) and two (2024) years later.

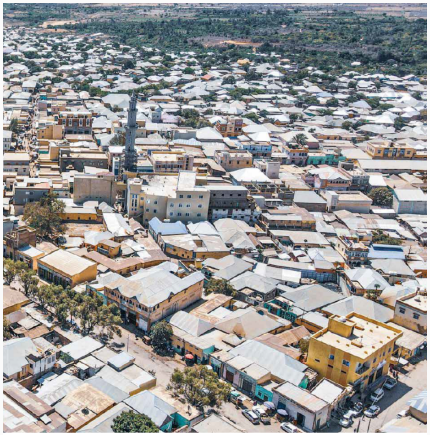
Context: Baidoa, Somalia

(a) Somalia



(b) Baidoa

Context: Baidoa, Somalia



(a) Central Baidoa

(b) IDP site

Empirical findings

Data and specification

- The sample included 4,116 households (2,872 treatment and 1,244 control) at baseline.
  - Attrition was minimal: the evaluation re-interviewed 99.3% at midline and 96.7% at endline.
  - There is a high fidelity of implementation: in treatment arm, near-universal receipt of transfers and transfer / training.
- We estimate standard intent-to-treat specifications and also report q-values corrected for multiple hypothesis testing.

Baseline sample characteristics

- Within the sample households, 83% are IDPs (remainder including refugees and host community members), and the majority of IDPs have been resident at least three years.
- Average household size is seven, including four children; the median dependency ratio is 1.5.
- Fewer than 1% of households reported any cash savings, but baseline asset value is around $250 on average.

Consumption and Food Security

	(1) Total consumption	(2) Food consumption	(3) Non-food consumption	(4) Moderate or severe HHS	(5) Livelihood coping score
UPG	0.81***	0.59***	0.22***	-0.30***	-0.57***
	(0.06)	(0.04)	(0.02)	(0.02)	(0.09)
q-value	0.001***	0.001***	0.001***	0.001***	0.001***
Control mean	2.63	2.03	0.61	0.42	1.71
N	3964	3964	3964	3982	3982

Assets and Financial Inclusion

	(1)	(2)	(3)	(4)
	Asset value	TLUs	Any savings	Any credit
UPG	449.24***	0.35***	0.42***	0.08***
	(15.83)	(0.02)	(0.01)	(0.02)
q-value	0.001***	0.001***	0.001***	0.001***
Control mean	196.13	0.14	0.04	0.57
N	3982	3982	3966	3974

Income

	(1) Any ag. + livestock	(2) Ag. + livestock income	(3) Any non-farm business	(4) Non-farm income	(5) Any wage	(6) Wage income
UPG	0.16***	32.39***	0.05***	3.81	-0.00	21.62
	(0.01)	(8.13)	(0.01)	(25.63)	(0.02)	(36.51)
q-value	0.001	0.001	0.001	0.317	0.317	0.206
Control mean	0.05	6.56	0.15	125.84	0.42	586.59
N	3,982	3,982	3,982	3,982	3,982	3,982

Generalized random forest

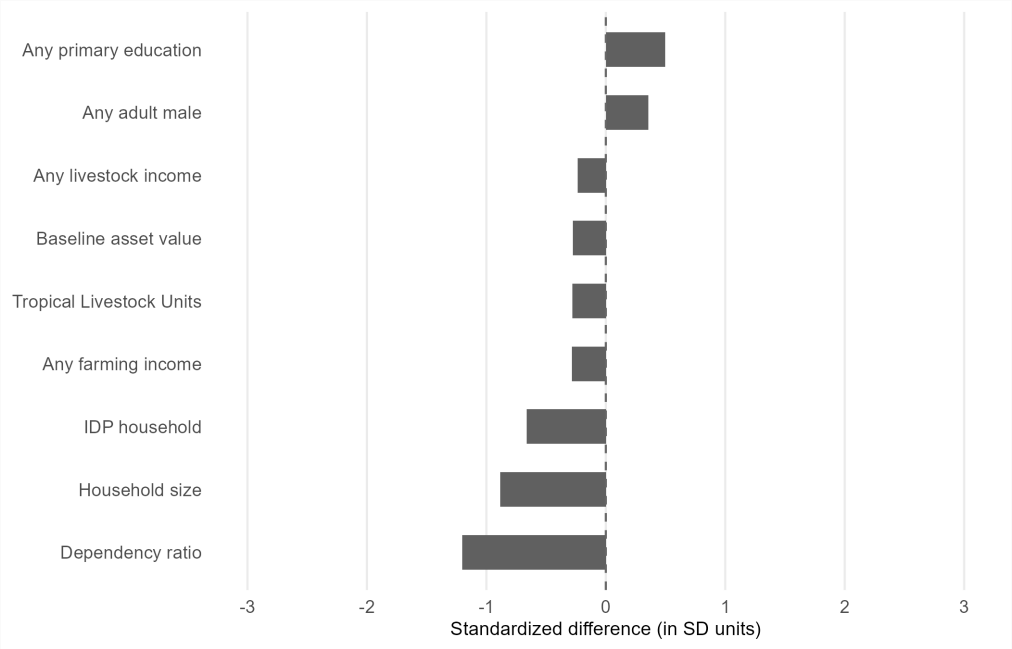
Overview

- We use recent machine learning methods to explore treatment effect heterogeneity using a generalized random forest (GRF) (Athey et al. 2019).
- The GRF algorithm builds a causal random forest (CRF) that allows for the estimation of conditional average treatment effects.
- This method is arguably well suited to our trial, characterized by a large sample and individual-level randomization —- both important conditions for the effective application of causal forest methods (Wager and Athey, 2018, Davis and Heller, 2017)

Out-of-bag CATE

- First, we seek to assess how much heterogeneity is observed in treatment effects for (log) consumption.
- We estimate what is known as the “out-of-bag” conditional average treatment effect (CATE).
  - The treatment effect for each observation is predicted using only the trees for which that observation was not used in the training set.
- We then categorize observations based on the quartile of the CATE, and identify the baseline covariates where the gap is largest.

QUARTILE GAPS IN BASELINE COVARIATES



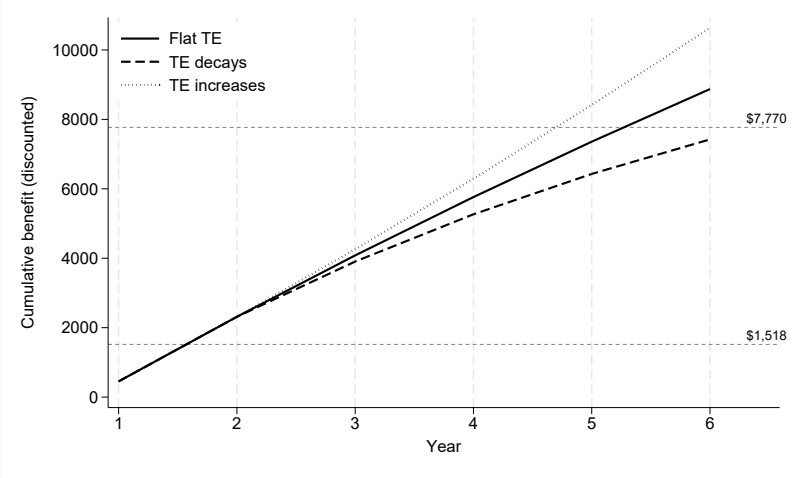
Comparison to stable settings

- Is this pattern of heterogeneous effects unique to our setting, or is it evident in our trials?
- We then use replication data from the Banerjee et al. (2015) and Bandiera et al. (2017) trials and estimate the same GRF algorithm.
- In brief: we find little evidence of the same pattern.
  - Demographic characteristics dominate in prediction in Somalia, while in the other two trials, baseline economic characteristics are predominantly predictive of heterogeneity.
  - Consistent with higher dependency ratio in Somalia; higher insecurity; peri-urban setting.

Cost-effectiveness

- UPG costs $7,770/household (2017 PPP): one of the most expensive graduation programs globally.
  - Comparable to Bedoya (2019) in Afghanistan: $7,470
- Favorable long-term ROI: Expected positive return within 4-5 years, even with substantial effect decay.

Figure 1: Cost-benefit trajectory



Conclusions

Summary

- After two years, the UPG intervention leads to sizable improvements in household consumption, asset accumulation, and financial inclusion.
- Gains are driven primarily by livestock income, particularly goats, with very limited evidence of livelihood diversification beyond agriculture.
- Treatment effects are strongest for smaller households with fewer dependents.

ACTED: ”Distribution of goats to IDPs and Host communities in Baidoa – July 2023”

Policy Implications

- Livestock-based gains reflect a natural livelihood strategy in Baidoa, a major livestock hub.
  - Yet, “you can’t goat your way out of poverty” (Lant Pritchett) —– sustained progress typically requires movement beyond agriculture.
- Treatment effects are strongest for smaller households with fewer dependents.
  - Results highlight the importance of tailoring interventions to household composition.
  - Livelihoods programs may prioritize smaller households, while larger ones may benefit more from ongoing cash transfers.

▸ Return

Assets vs TVET

- More likely to choose assets:
  - IDP housholds
  - Higher dependency ratio
  - Less educated
  - No lactating or pregnant women