

Lift and Shift:  
The Effect of Fundraising Interventions in  
Charity Space and Time

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# Overview

- Do successful fundraising interventions lift total donations or shift the composition or timing?

## “The cold, hard truth about the Ice Bucket Challenge”

*The key problem is funding cannibalism. That \$3 million in donations doesn't appear out of a vacuum. Because people on average are limited in how much they're willing to donate to good causes, if someone donates \$100 to the ALS Association, he or she will likely donate less to other charities.*

- William MacAskill (co-founder of Giving What We Can)



- **What we do:**
- Address “lift/shift” question using a dataset that is rich in charity space and time
  - Major fundraising appeals lift total donations. But there is also time-shifting (in “other”)
- Introduce a dynamic model with two sources of warm glow across two time periods
  - Derive the comparative statics of fundraising appeals and map empirical findings to warm glow preferences

# Data

- Anonymized administrative data from Charities Aid Foundation (CAF) accounts
  - Checking account for donations; set up with (min) £100 one-off investment (£10 monthly); funds used to make donations to charity by check or online. Can be topped-up at any time
- Observe every donation (amount, charity, date) from June 2009 – July 2014
  - 4,475,018 donations. 107,559 account-holders. 80,000+ charities
  - Rich in charity space and time
- CAF donors represent donors who do a large share of total giving
  - 70% CAF donors would be in top 20% of UK Giving population
  - Top 20% of UK Giving donors account for 70% total

## DEC disaster appeals (natural disasters/ humanitarian crises)

- Disaster Emergency Committee (DEC) is a co-ordinating committee for 13 leading international charities that launches appeals in response to overseas natural disaster/ humanitarian crises
- Appeal triggers actions by the Rapid Response Network
  - Banks, Post Office set up to receive donations
  - Appeal packages broadcast on national tv/ radio



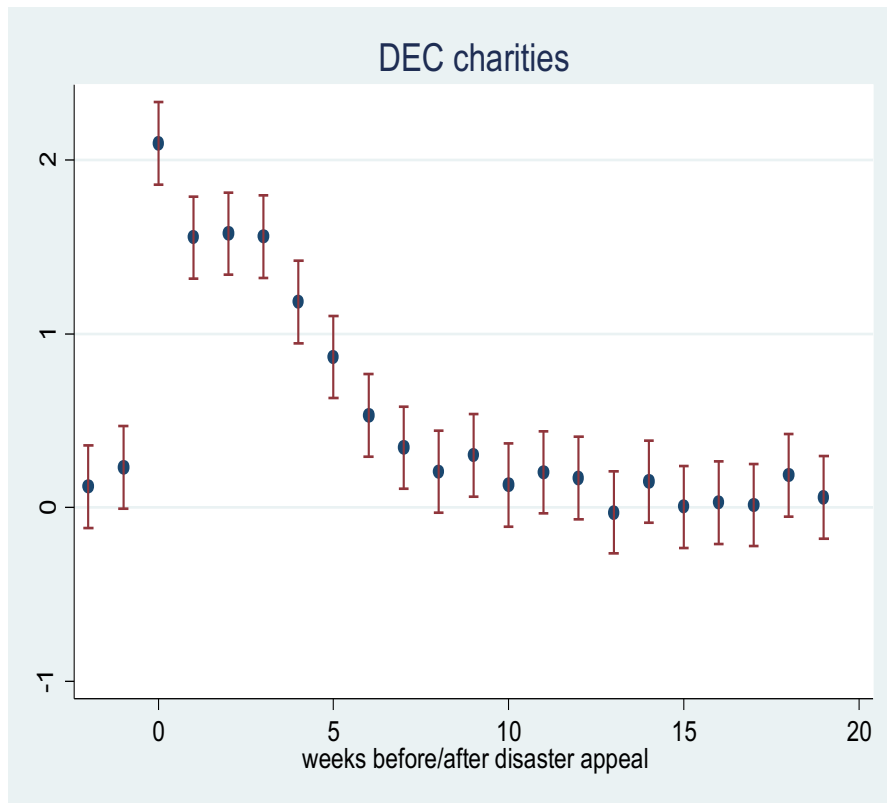
### Six appeals during sample period

Date of appeal	Location	Type	Total donations (DEC figures)
10/04/2009	Sumatra	Earthquakes & Typhoons	£9.3 m
01/14/2010	Haiti	Earthquake	£107m
08/03/2010	Pakistan	Floods	£71m
07/06/2011	East Africa	Famine	£79m
03/20/2013	Syria	Effects of Civil War	£27m
11/11/2013	Philippines	Typhoon	£95m

- Regular telethons = £50-£100m; Ice Bucket Challenge = £6m
- External to UK; can rule out other changes associated with disaster that might affect donations
- Unexpected. Occur at different times of the year & (mainly) with reasonable-length intervals

## Estimated response to disaster appeals

Coefficients on weekly indicators: Dependent variable = ln donations

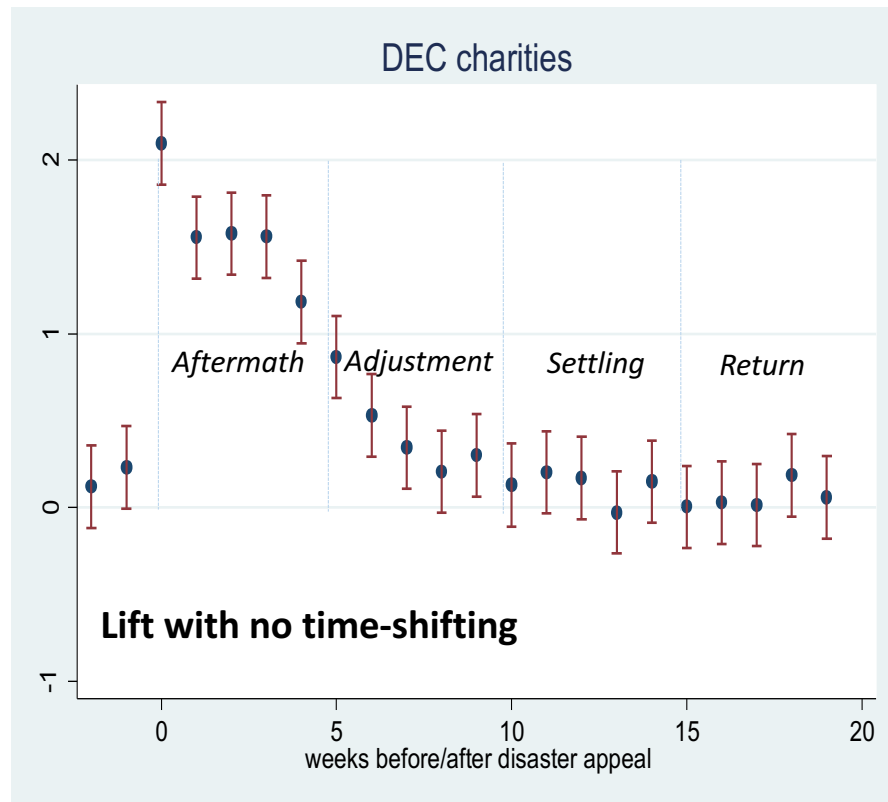


- Empirical strategy
- Averaging over six appeals (similar pattern for each)
- Model log of donations to *DEC-13* and *Other* on a day-to-day basis
- Estimate deviations from baseline during 2 weeks before and 20 weeks after appeal
- Control for systematic time effects

Notes to figure: Difference in average daily (ln) donations, relative to baseline of non-disaster periods. Estimated coefficients plus confidence intervals. Regressions (estimated using OLS) include controls for trend, month, day of month, day of week, public holidays and major telethons.

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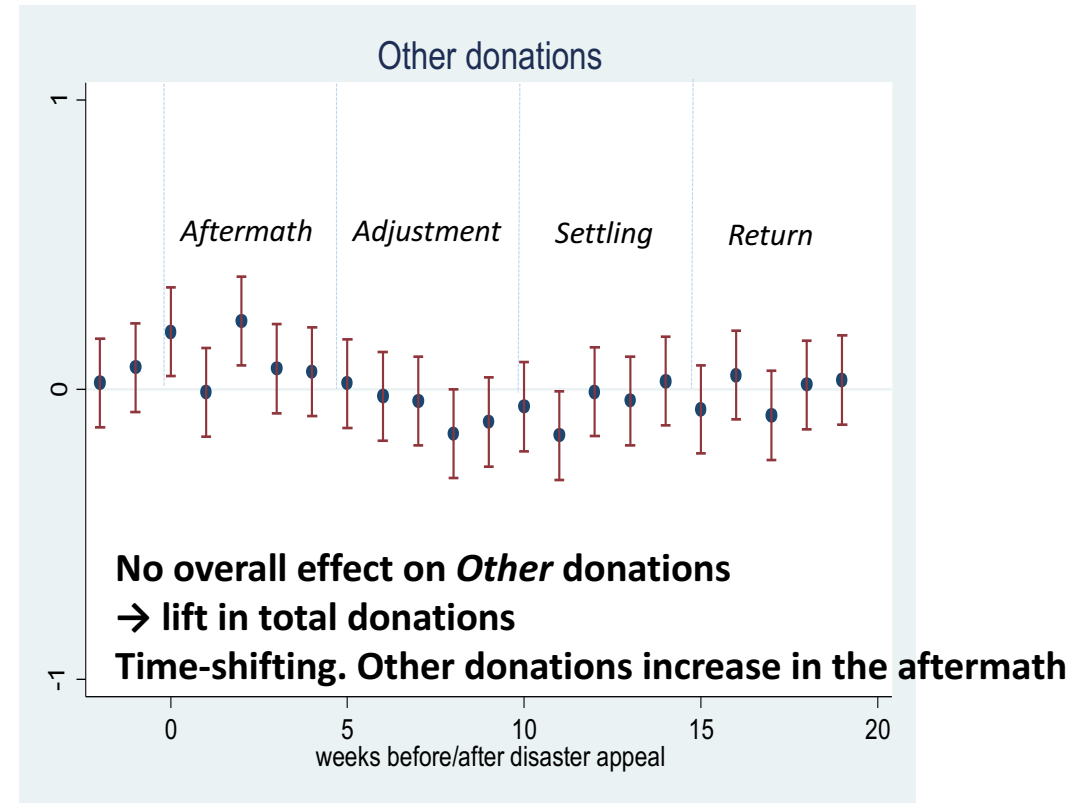
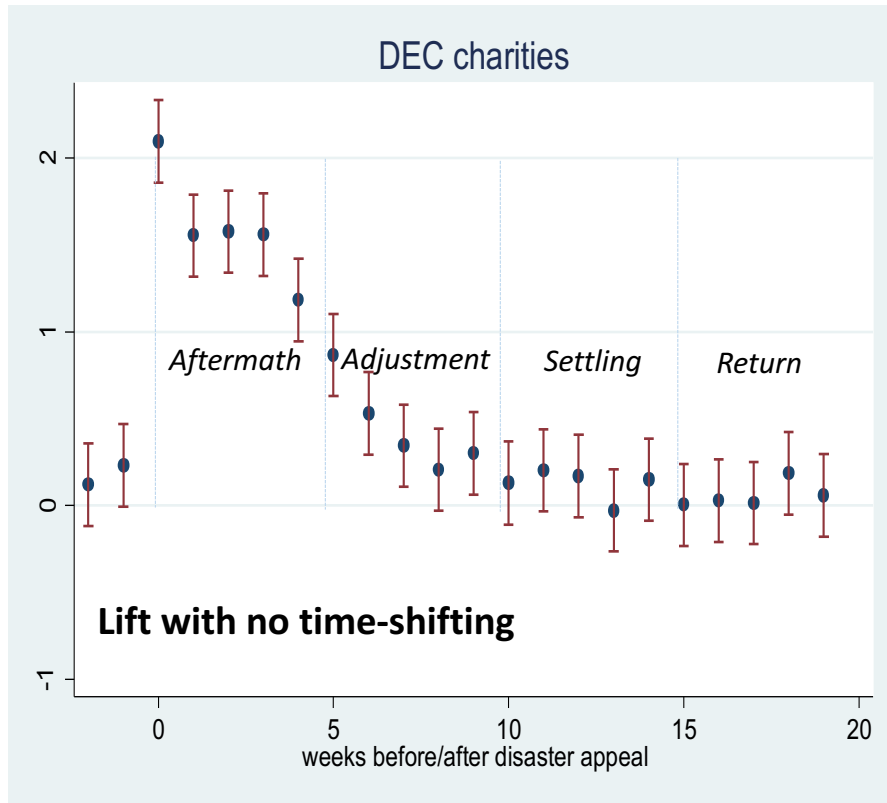


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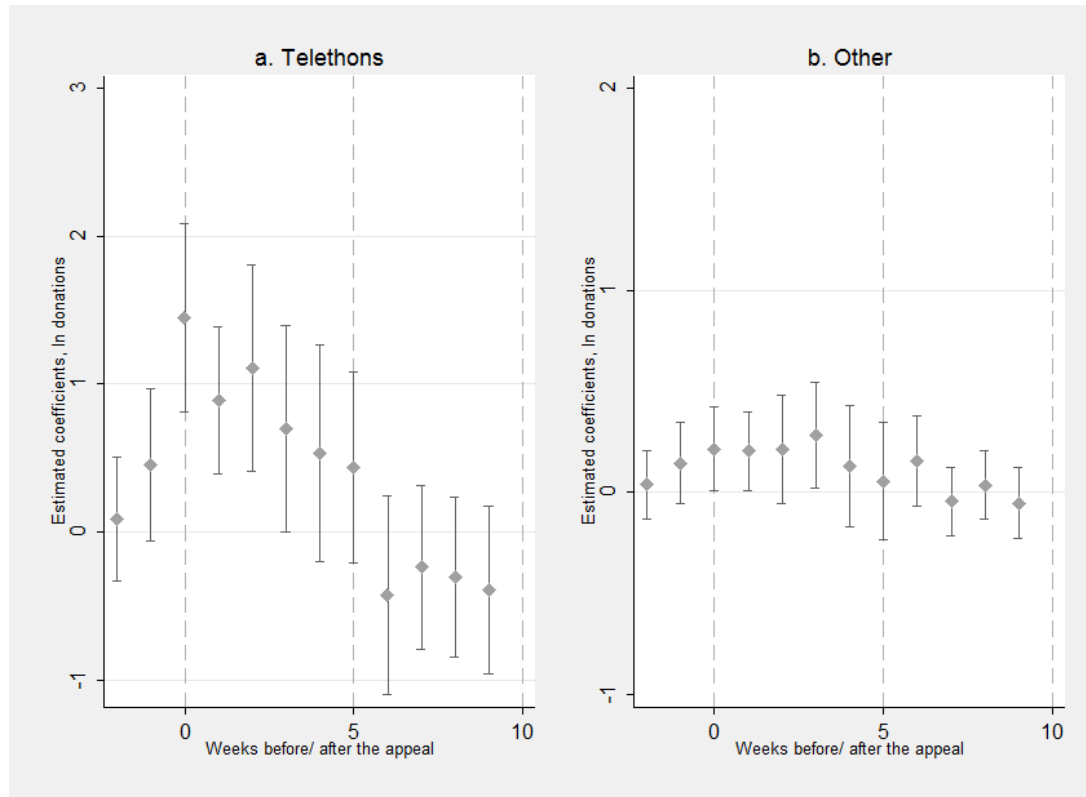


## Further results

- Main findings confirmed using alternative definitions of *Other*, excluding international charities
- Time-shifting occurs across religious, social services, health, education, environment and other charities
  - At dis-aggregated level, there is shift from donations to health charities
- The time-shifting is driven by “disaster donors”
  - There is no time-shifting in donations by non-disaster donors
  - Rules out that time-shifting is driven by marketing activity by *Other* charities
- Lift is not unique to DEC appeals. Major annual fundraising telethons have the same effect.

## Estimated response to major telethons, by week

BBC Children in Need (Nov, raises £45-50m) Comic Relief/ Sports Relief (March, raises £50-100m)



Notes to figure: Difference in average daily (ln) contributions, relative to baseline during weeks before/after telethon appeals. The figures plot estimated coefficients plus confidence intervals. Regressions (estimated using OLS) include controls for year, month, day of month, day of week, Christmas, New Year, public holidays. **Non-disaster periods only.**

## Interpreting the response pattern (1)

- Salience
- Would affect all donors, not just those who respond to the disaster
- Transactions costs (Huck and Rasul, 2010; Meer and Rigbi, 2014)
- But...
  - No greater bunching of donations (i.e. donors giving to DEC-13 and other on the same day)
  - Increase in *Other* donations on intensive, as well as extensive margins
  - Transactions costs don't easily allow for differences across charitable purposes (or appeal types)

## Interpreting the response pattern (2)

- Warm glow characteristics model:

$$\omega_{st} = \alpha_{st} s$$

$s$  is the money donation to DEC-13

$\omega_{st}$  is the warm glow (=utility) from money donation

$\alpha_{st}$  is the effectiveness of a money donation in generating warm glow (price of warm glow =  $1/\alpha_{st}$ )

Effectiveness parameter assumed to be affected by fundraising intervention

- Two periods, two sources of warm glow

- $U = c + \theta g^\eta \quad \theta \geq 0; \eta \geq 0; c = c_1 + c_2$

- $g$  = two-period aggregate warm glow characteristic:  $g = (g_1^\delta + g_2^\delta)^{1/\delta}$

- $\delta = (\rho - 1)/\rho$ ; where  $\rho$  is the inter-temporal elasticity of substitution between  $g_1$  and  $g_2$

- $g_t$  = single-period aggregate warm glow characteristic:  $g_t = (\omega_{st}^\mu + \omega_{rt}^\mu)^{1/\mu}$

- $\mu = (\sigma - 1)/\sigma$ ; where  $\sigma$  is the intra-temporal elasticity of substitution between  $\omega_{st}$  and  $\omega_{rt}$

## Some take-aways from the model

- Donation responses to fundraising interventions depend on the interplay between elasticity of demand for aggregate warm glow, the inter-temporal elasticity and the intra-temporal elasticity of substitution
- Proposition 1
- Donation responses do not map one-to-one to complementarity/substitutability in warm glow
- $s_1 \uparrow r_1 \uparrow$  does not imply that “warm glows” from donations to the two causes are complements
- The warm glows may be (intra-temporal) substitutes, but donations to both charities may rise in the aftermath appeal:
  - Because of an increase in aggregate giving (reduced consumption)
  - And because of a shift in giving from the future
- Proposition 2
- Dynamic perspective can aid identification – the observed pattern  $s_1 \uparrow r_1 \uparrow; s_2 \uparrow r_2 \downarrow$  implies that warm glow characteristics are substitutes

## Summing up....

- Exploiting data rich in charity space and time, we show that major appeals increase donations to the fundraising charity and total donations
  - Practical significance
  - Welfare implications
- The presence of time-shifting highlights the importance of a dynamic perspective
  - Empirically important to capture responses to fundraising interventions
  - We provide a framework for mapping observed donation responses to underlying preferences
    - In the case of DEC appeals, warm glow from donations to *DEC-13* and *Other* are substitutes