Livelihood Empowerment Against Poverty Predicted Impacts

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Simulations/Expected Impacts

- Where do we expect to see impacts, and how big?
- Two factors at play:
  - relative size of grant; how large is it relative to the household budget; larger the relative size, bigger the potential impact
  - relationship between income and the outcome of interest; if demand for an outcome is unrelated to income then we don't expect LEAP to have an impact on that outcome
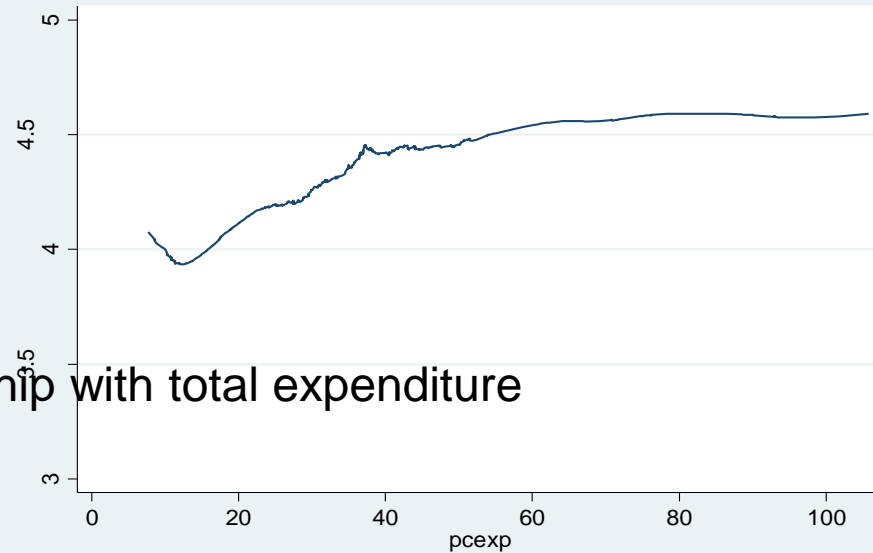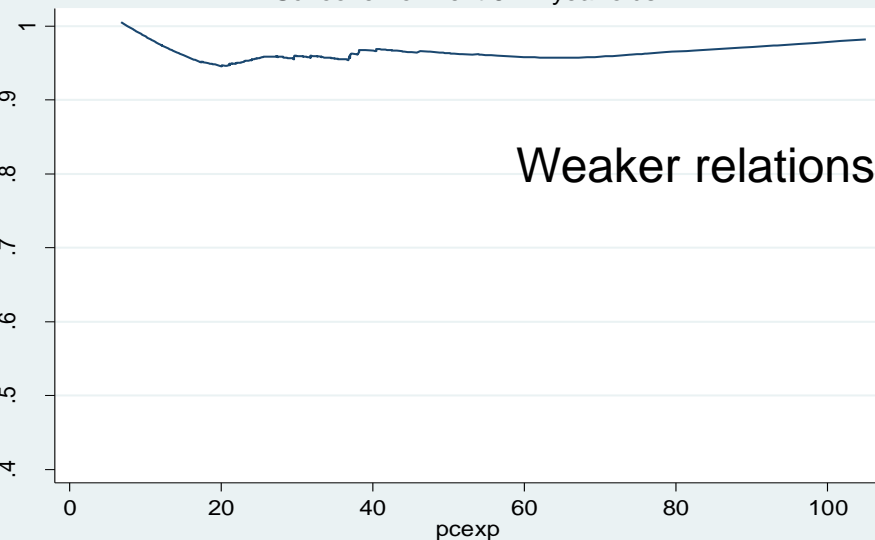   - Primary school enrollment is an example

Food Expenditure · Raven's Test Score · School enrollment 6-12 year olds · Ill in last two weeks
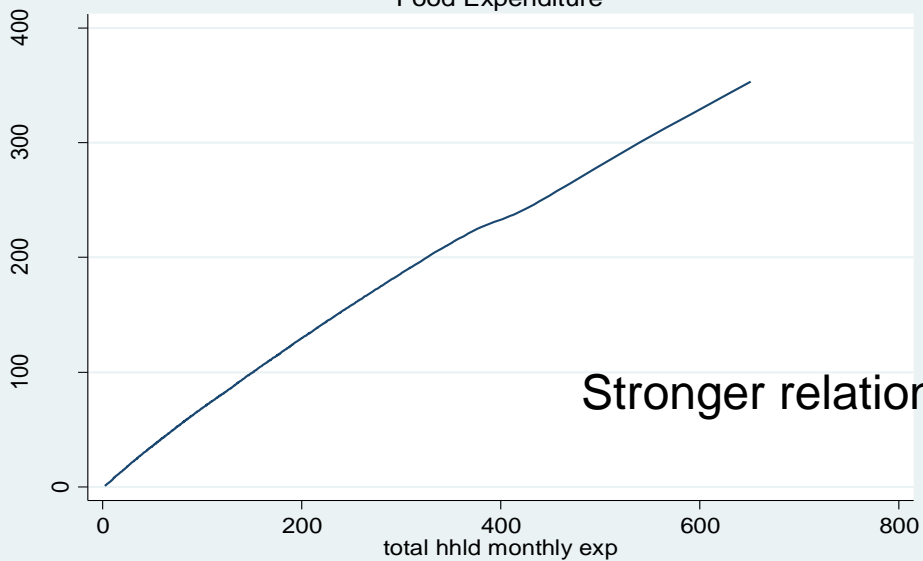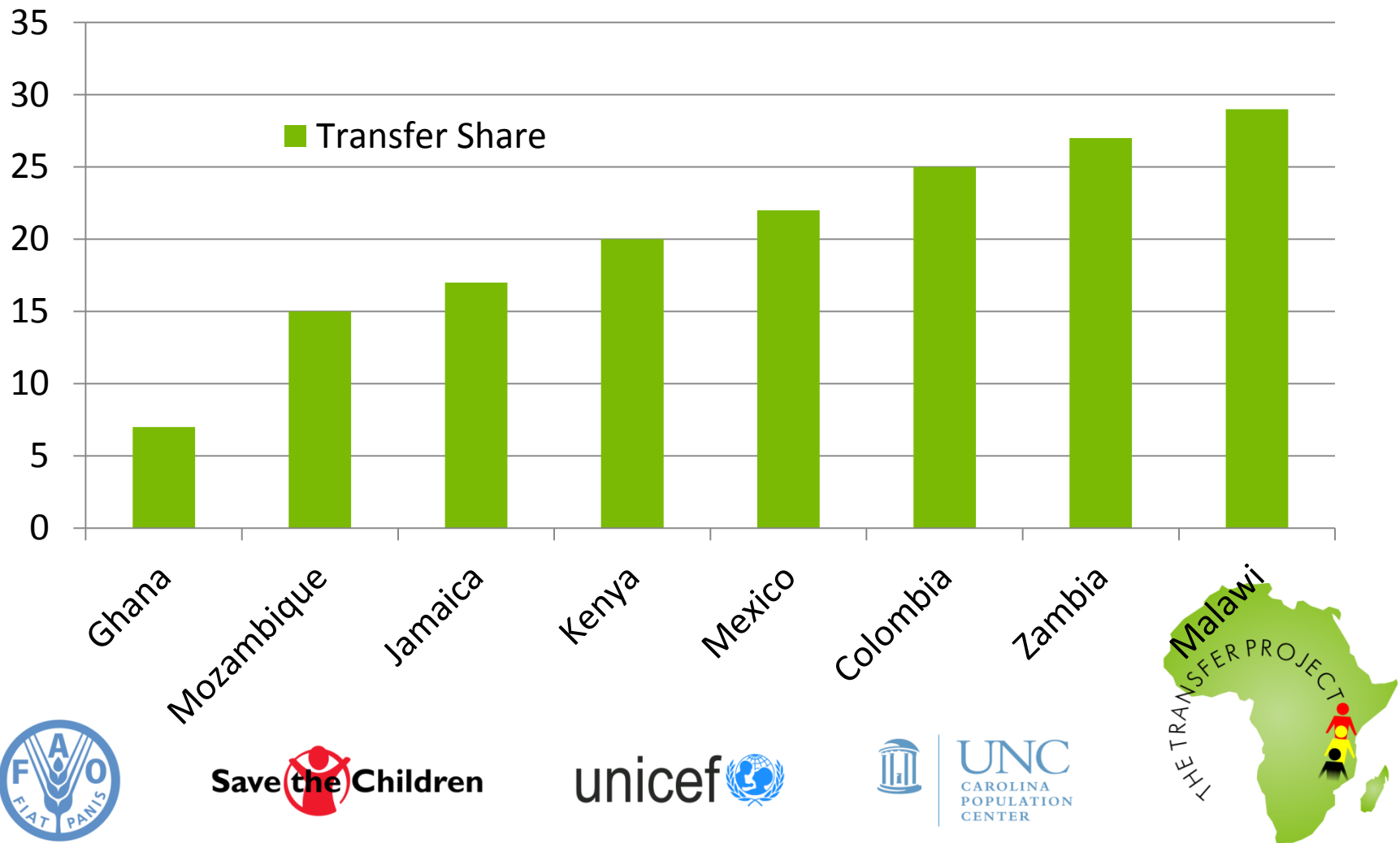
Stronger relationship with total expenditure

Weaker relationship with total expenditure
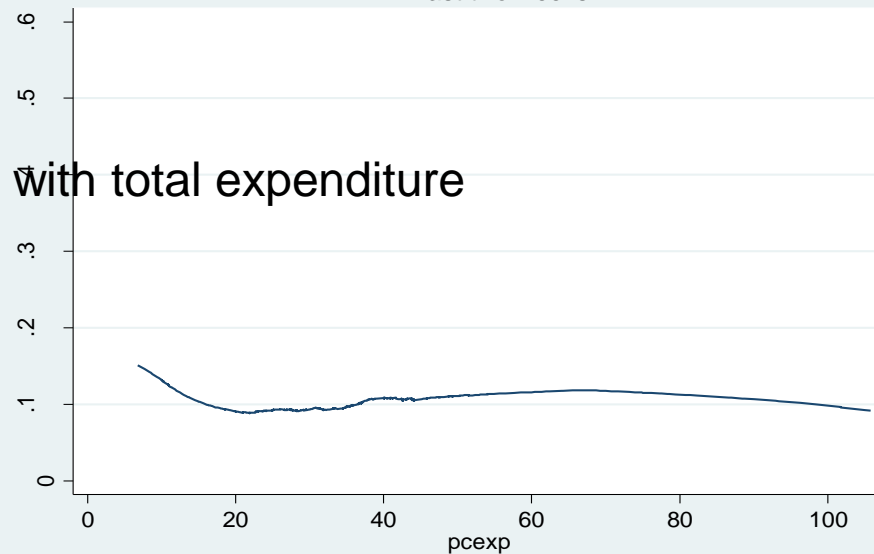
Transfer as Share of Participant Consumption: LEAP level is very low by international standards

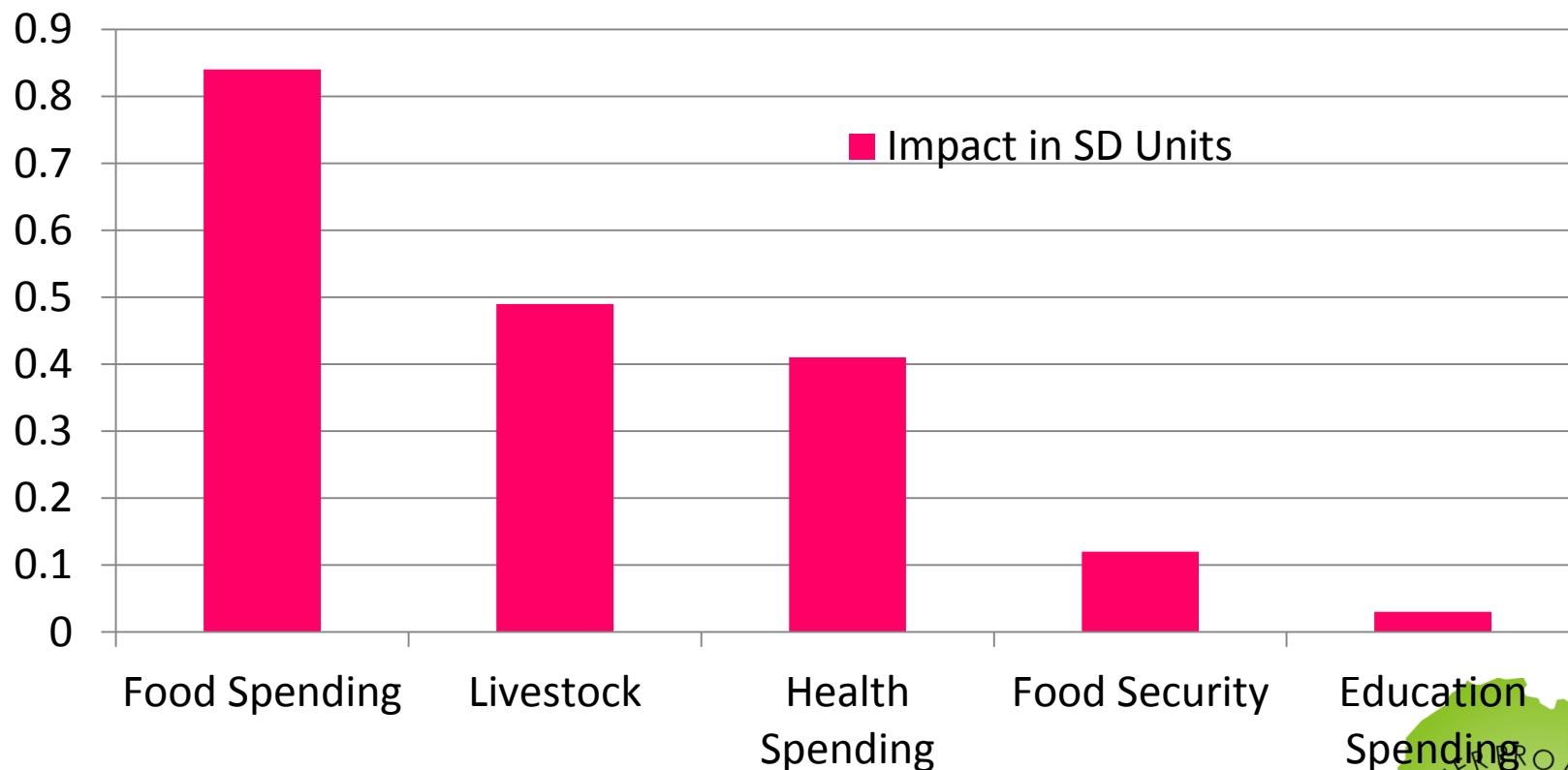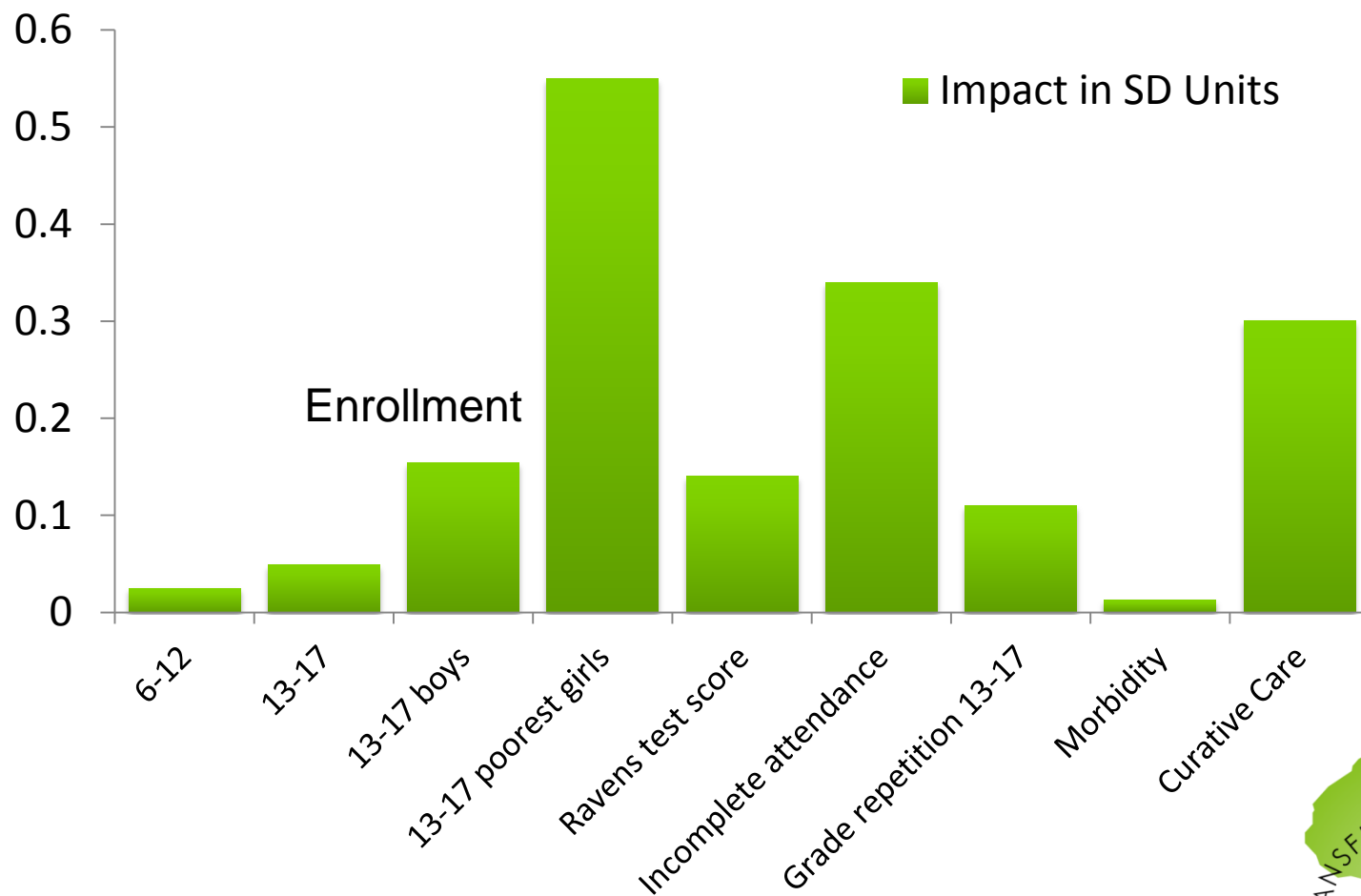# How do we predict the *ex-ante* impact of LEAP?

- Estimate the relationship between total hh spending (pcexp) and each outcome
  - $Y = a + b_1(\text{pcexp}) + b_2 * X + u_i$
- Use this equation to predict Y for an increase in pcexp
  - The larger is b_1, larger the impact of LEAP on Y
- For which outcomes do we find large values of b_1?

Predicted Impacts on Household Outcomes
(standardized units)

Predicted Impact on Children's Outcomes

Bar chart titled "Impact in SD Units" with y-axis ranging from 0 to 0.6. Label "Enrollment" appears over the first four bars.

Category	Impact in SD Units
6-12	~0.025
13-17	~0.05
13-17 boys	~0.155
13-17 poorest girls	~0.55
Ravens test score	~0.14
Incomplete attendance	~0.34
Grade repetition 13-17	~0.11
Morbidity	~0.01
Curative Care	~0.30

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Predicted impact of LEAP on Child Outcomes

	(1)	(2)
Outcome	Impact in SD Units	Actual Impact
<u>School enrollment</u>		
6-17	0.025	0.0004
6-12	0.006	0.0000
13-17	0.049	0.0016
13-17 boys	0.154	0.0051
13-17 girls in poorest 50 percent of households	0.550	0.0182
Ravens test score (range is 0 – 7)	0.140	0.0020
Incomplete school attendance—poorest 50 percent	0.340	0.0139
Grade repetition 13-17	0.110	0.0050
Morbidity last 2 weeks	0.013	0.0003
Curative care if sick	0.300	0.0147

Actual impact is (impact SD units)*(0.10)*(SD of indicator)
LEAP transfer is 0.10 SD of household pc expenditure

Approach for Simulating Impacts on Spending

- Derive responses to change in pc expenditure for each budget item (foods, non-foods)
  - Known as elasticity of demands
- Impose budget constraint—household cannot spend more than the value of transfer (G¢3.50 pp)
  - Elasticity>1: Luxury (spend proportionately more as income increases)
  - Elasticity<1: Necessity (spend proportionately less as income increases)

Estimated Expenditure Elasticities
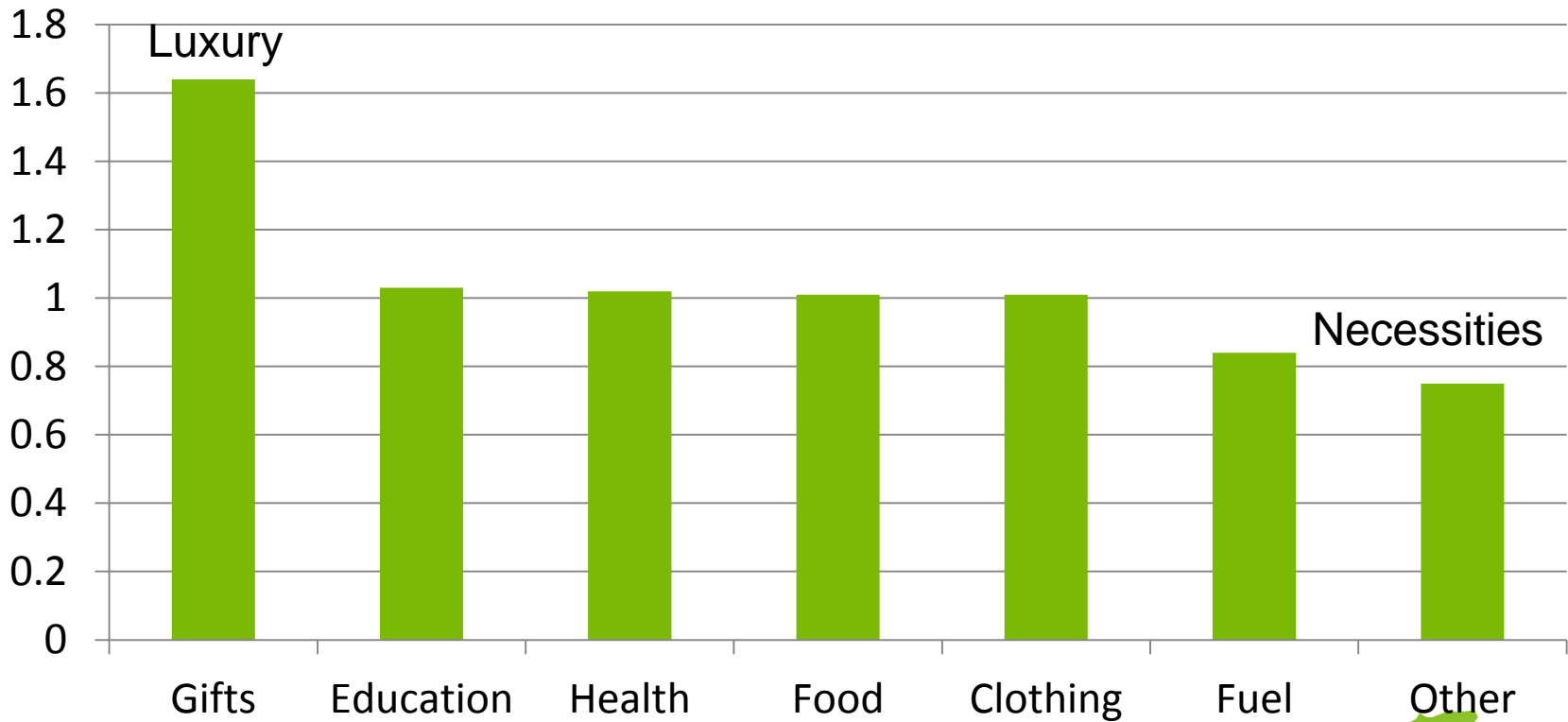
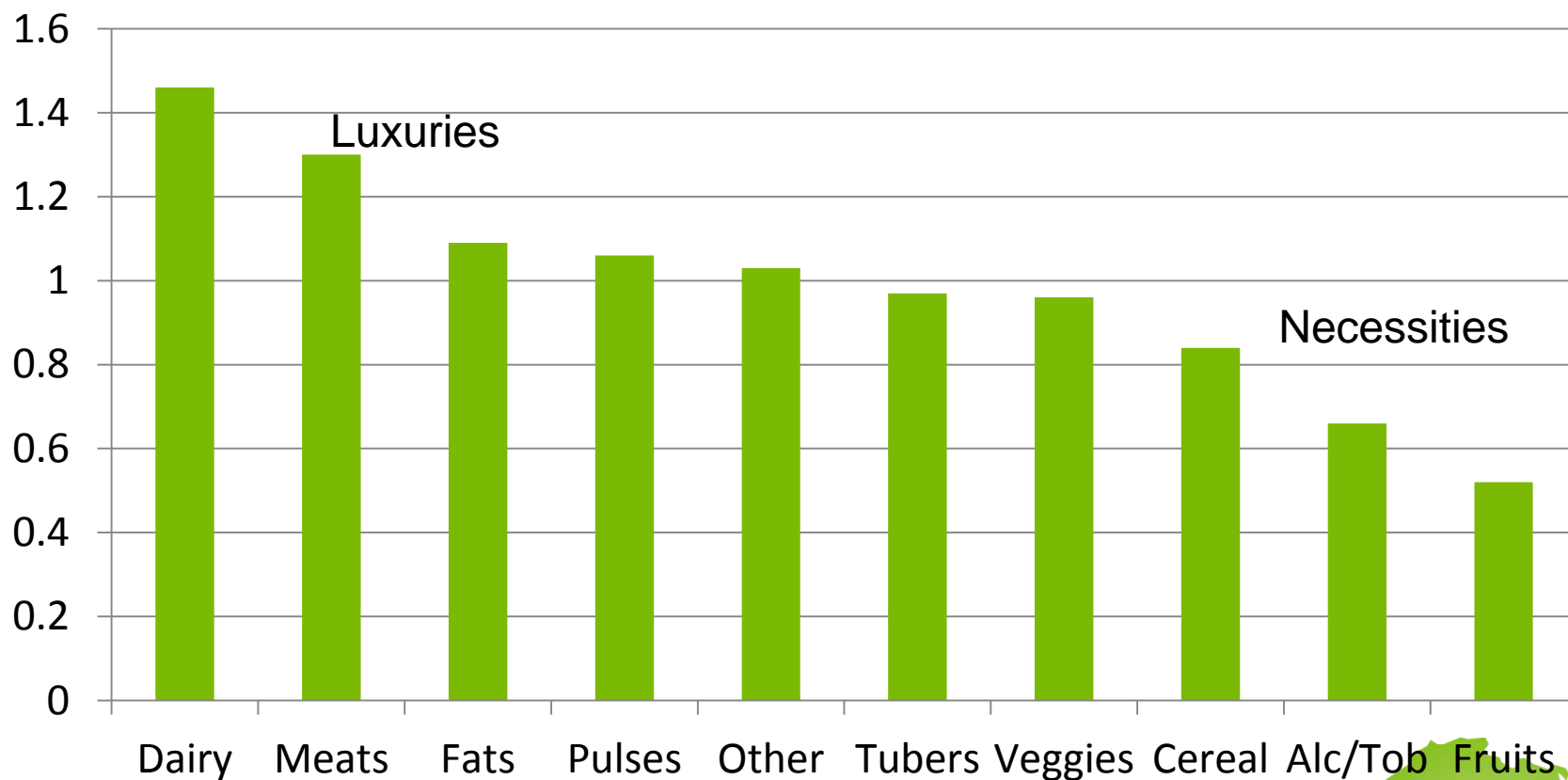# Predicted Shares from LEAP Transfer vs. Existing Shares
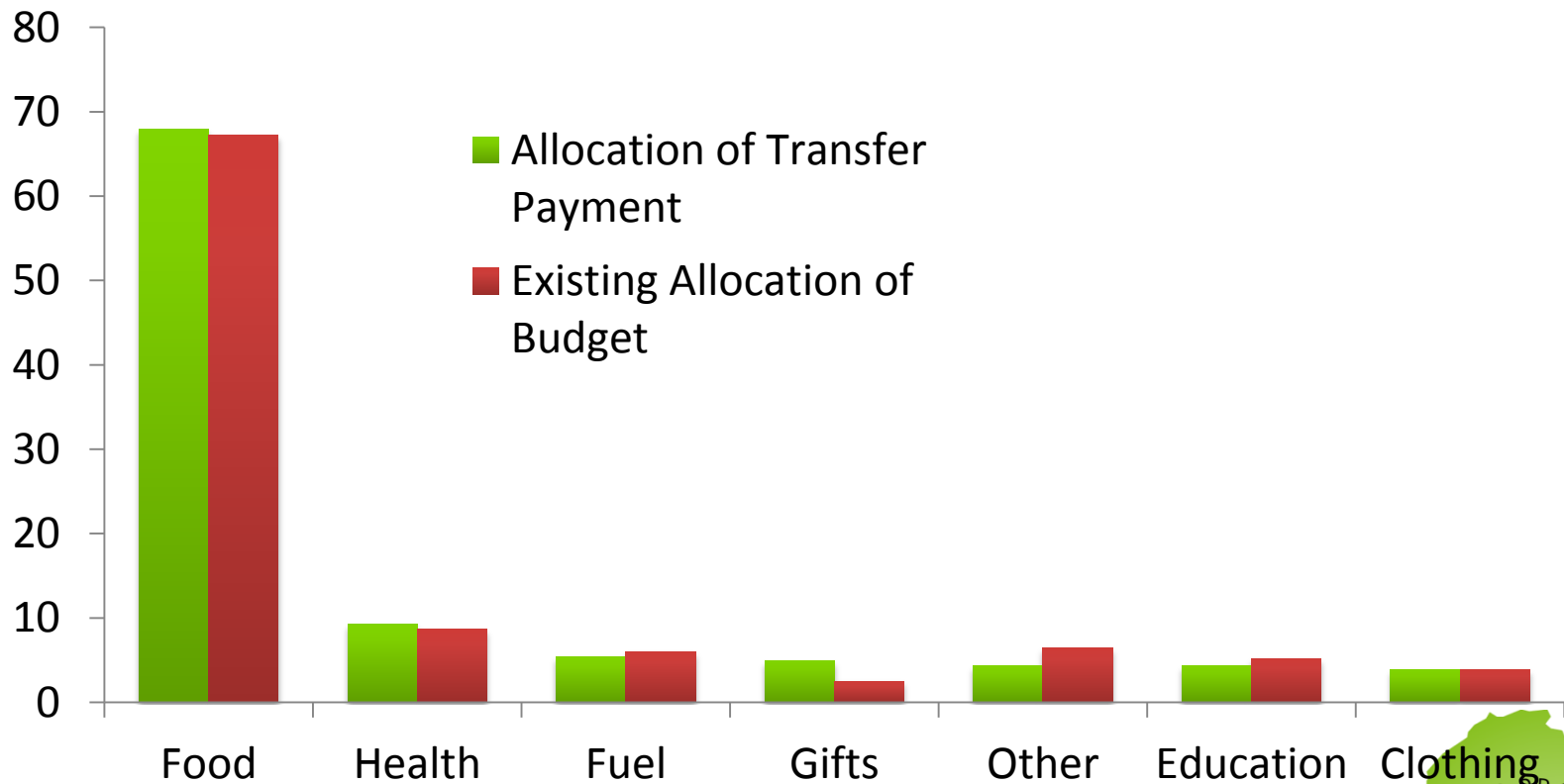
Predicted Impact of LEAP on Spending Items

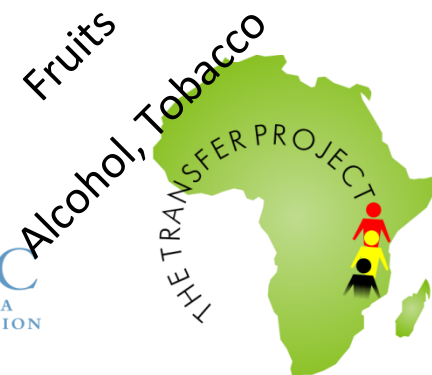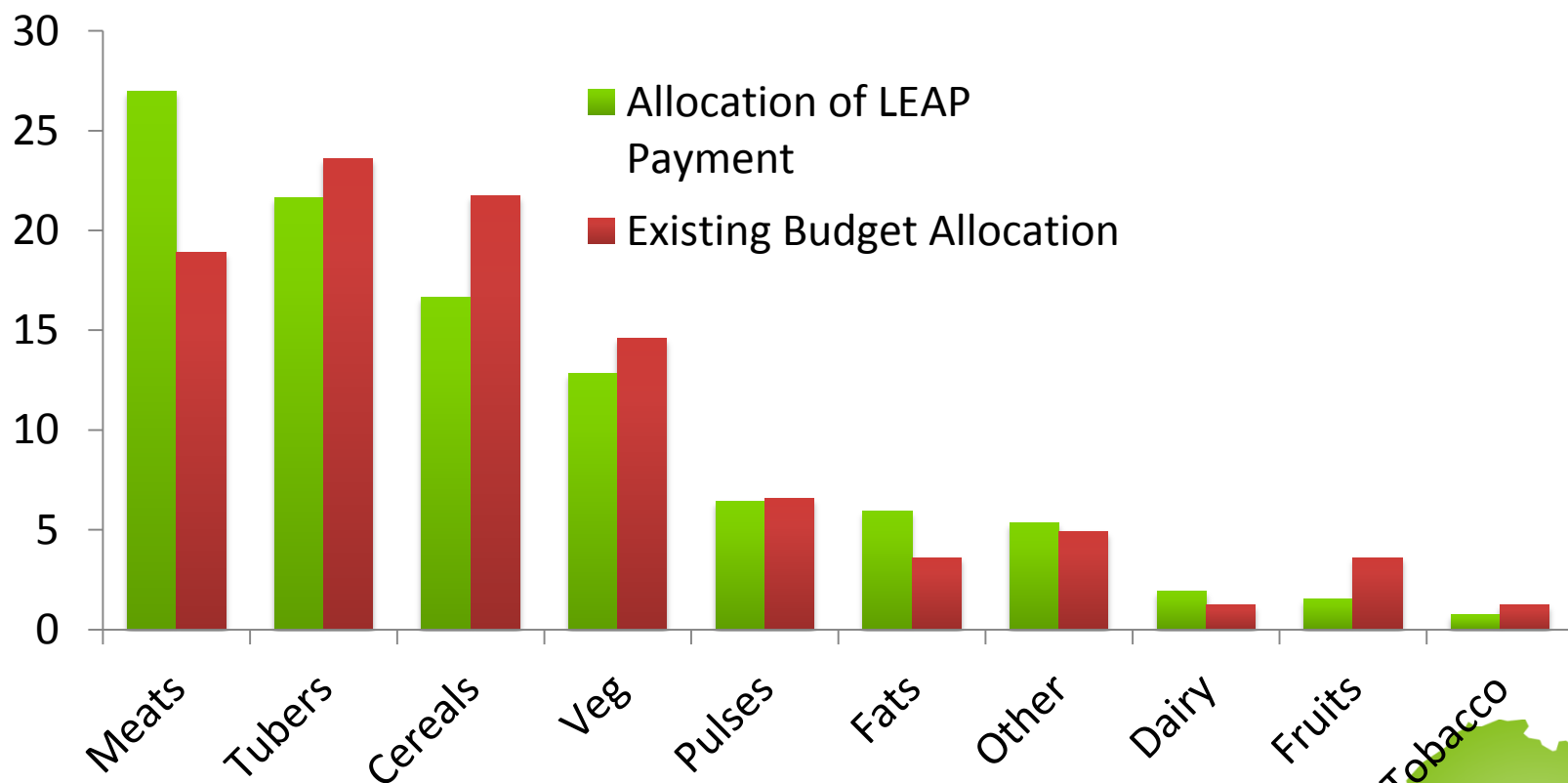|	(1) Cedis	(2) Allocation of Transfer Payment	(3) Existing Allocation of Budget
Food	2.55	67.96	67.24
Clothing	0.14	3.84	3.92
Health	0.35	9.21	8.70
Education	0.16	4.34	5.20
Gifts	0.18	4.94	2.52
Fuel	0.20	5.36	6.00
Other	0.16	4.35	6.43
Total Increase	3.75	100.00	100.00

Remember for later

Estimated Food Expenditure Elasticities

Predicted Food Shares from LEAP Transfer vs. Existing Shares

Predicted Impact of LEAP on Food Consumption

	Cedis	Allocation of LEAP Payment	Existing Budget Allocation
Cereals	0.44	16.67	21.75
Tubers	0.57	21.65	23.60
Pulses	0.17	6.43	6.59
Fruits	0.04	1.54	3.61
Meats	0.71	26.97	18.88
Dairy	0.05	1.92	1.24
Fats	0.16	5.93	3.61
Veg	0.34	12.83	14.58
Other	0.14	5.33	4.91
Alcohol, Tobacco	0.02	0.73	1.24
Total Increase	2.62	100.00	100.00

Will LEAP cover the food poverty gap?

		Current Transfer	Double Transfer	Triple Transfer	Quadruple Transfer
1.	Mean transfer	13	26	39	52
2.	Transfer per ADEQ ((1)/2.8)	4.6	9.2	13.8	18.4
3.	Predicted increase in food spending [(2)*(.68)]	3.1	6.2	9.3	12.4
4.	Mean food poverty gap per ADEQ [GLSS05]	11	11	11	11
5.	Percent of gap covered by LEAP [(3)/(4)]	28	56	84	113

Highlights

- Income effects on many child development outcomes are strong among LEAP households
  - Strong potential for LEAP to improve outcomes

- LEAP transfer size is low relative to global standards (7% of pc expenditure)
  - Limits potential impacts of program

- Raising transfer size by 3 or (preferably) 4 times can lead to impacts comparable to other successful programs

Highlights

- Budget share analysis reveals that:
  - 68 percent of transfer will be spent on food
  - Patterns of spending out of transfer will be about the same as current spending, except for slight increase in health (also found in Kenya CT-OVC)

- Food composition will change
  - Much larger share to meats and fats, at the expense of cereal, tubers and fruits
  - Protein consumption will rise