The Impact of Zambia's Child Grant Program (CGP) on Child Height

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August 27, 2020

Evolution of social cash transfers in Zambia

GRZ budget contribution went from US$5m to US$35m in 2014, US$45m in 2015 and US$66m in 2018

Households Reached by Cash Transfers in Zambia

628,000 hhlds
15% of population

Merger into one harmonized program, scale-up

CGP, MCP pilots

Kalomo, Chipata pilots
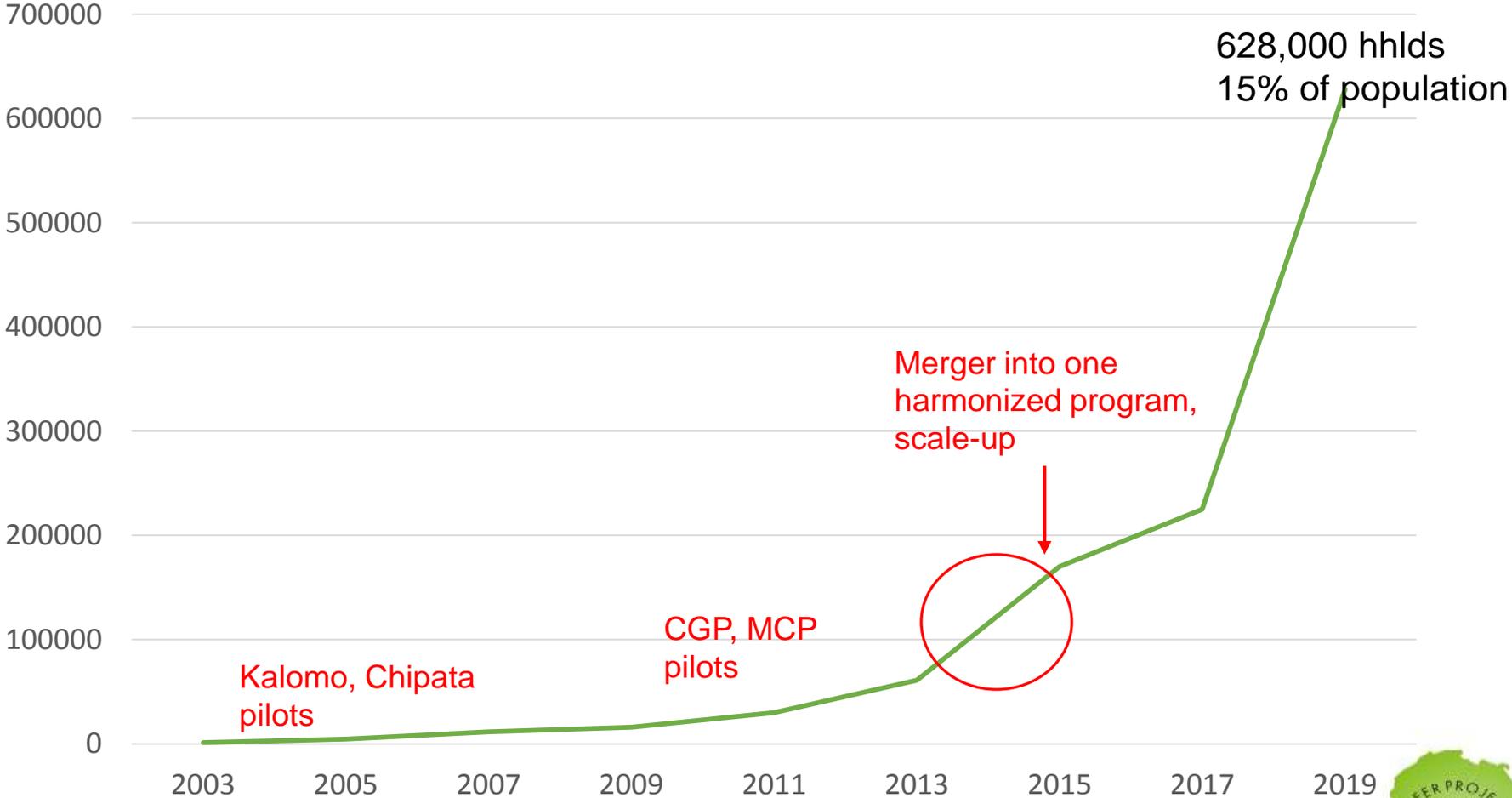
The Child Grant Program (CGP)

- One of two pilots initiated in 2010 to test alternative cash transfer designs

- Implemented by Ministry of Community Development and Social Services (MCDSS)

- Target: <u>Any</u> households with a child under 3 enrolled

- Unconditional cash transfer, 55 Kwacha per month (increased over time), paid in cash bi-monthly

- No differentiation by household size

- Three districts: Shangombo, Kalabo and Kaputa

	Survey waves and sample size N=2519 **Treatment Group=1259 (45 CWACs)** **Control Group=1260 (45 CWACs)**
2010	Baseline
2012	24m follow-up (N=2298)
2013	36m follow-up (N=2459)
2014	48m follow-up (N=2423)
2017	84m follow-up (N=2138)

Longitudinal cluster randomized control trial
Stage 1: Randomly selection CWACs for the study (30 per district)
Stage 2: Randomly assign CWACs to intervention or control, 15 per district in each group [45 intervention CWACs, 45 control]

Random selection of CWACs at MCDSS

Access to Kalabo and Shangombo improved dramatically over the study period

## Baseline 2010   ## 2017 follow-up

# Baseline extreme poverty rates much higher than rural households
(mean consumption per person per day US$0.30)

Extreme Poverty Rates of CGP households at Baseline

- All Zambia Rural
- CGP
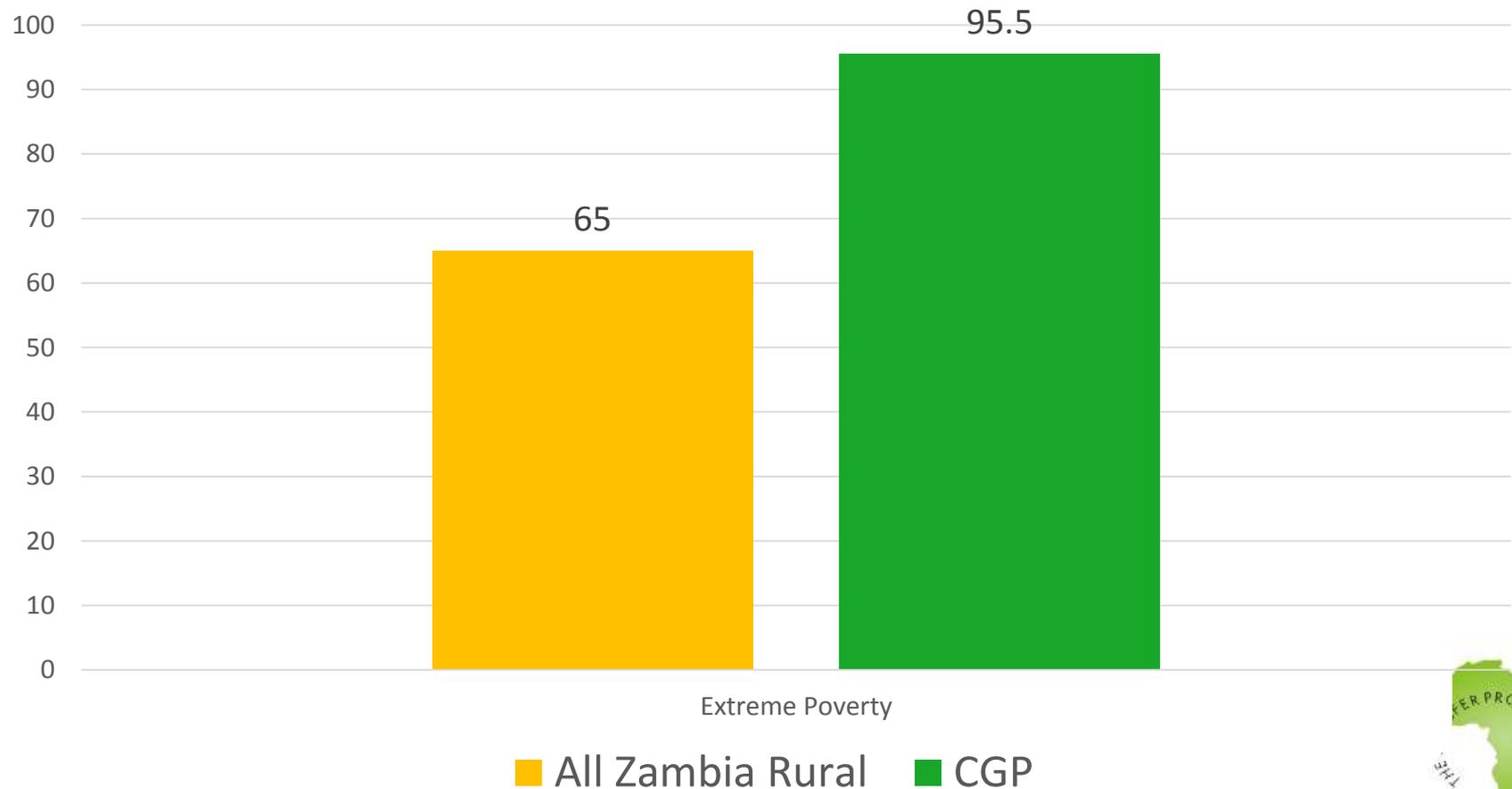
CGP households much more food insecure than all rural households

Percentage eating <2 meals per day
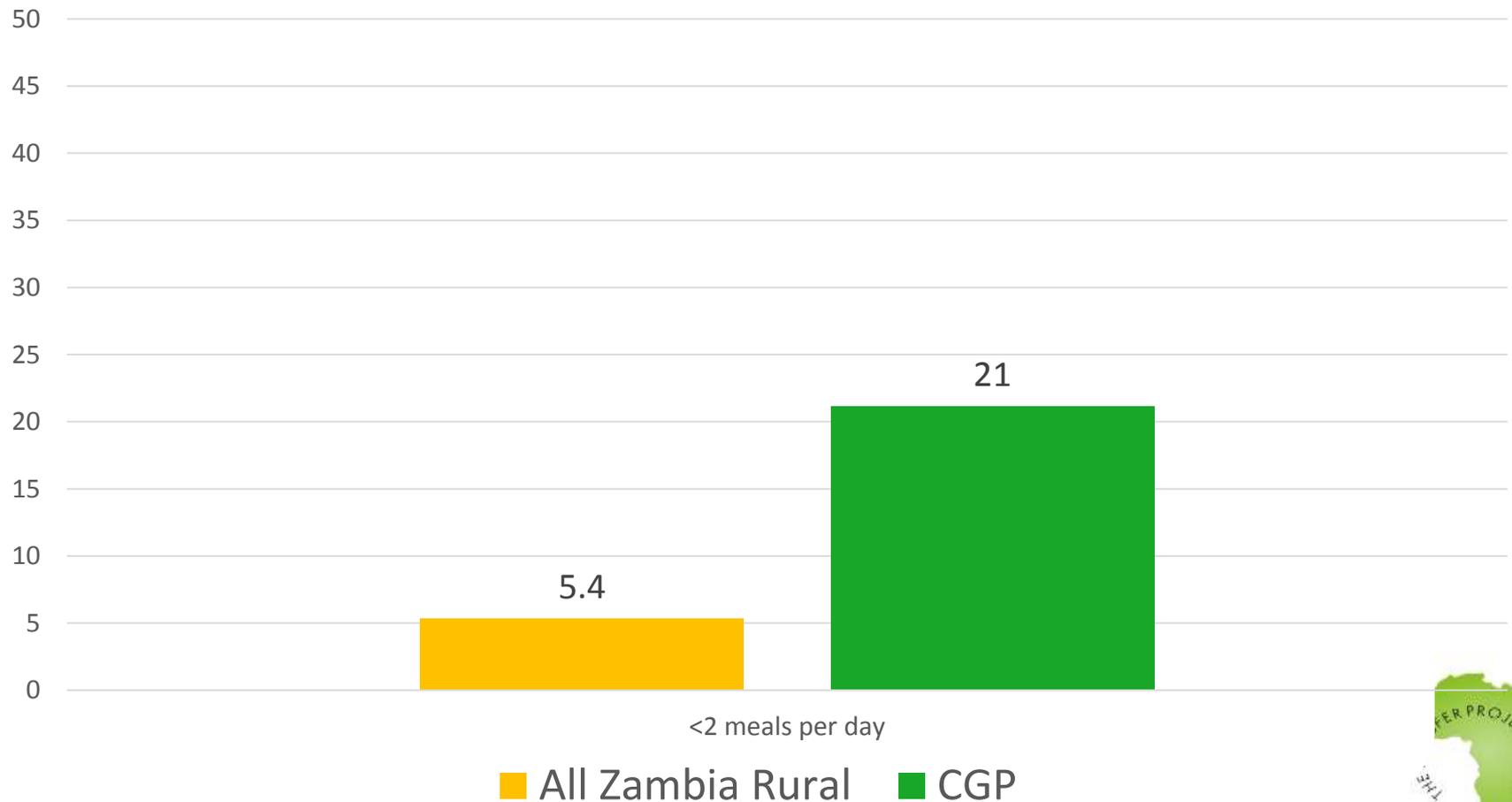
Demographic profile of CGP households
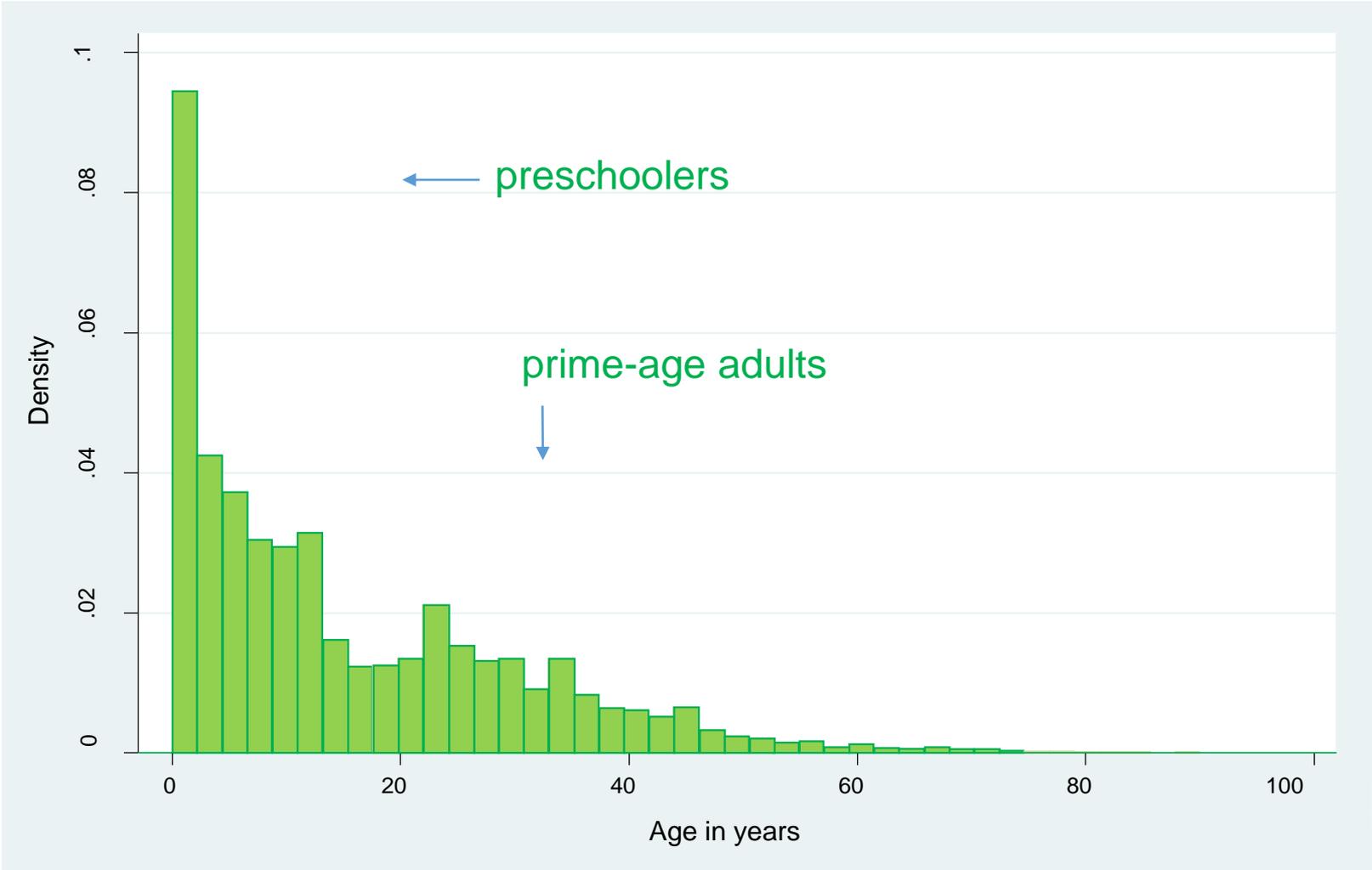
And how it's changing over time

Ageing of the study households

Pre-school children ageing

Legend: 2010 (solid line), 2014 (dashed line)

x-axis: age_final
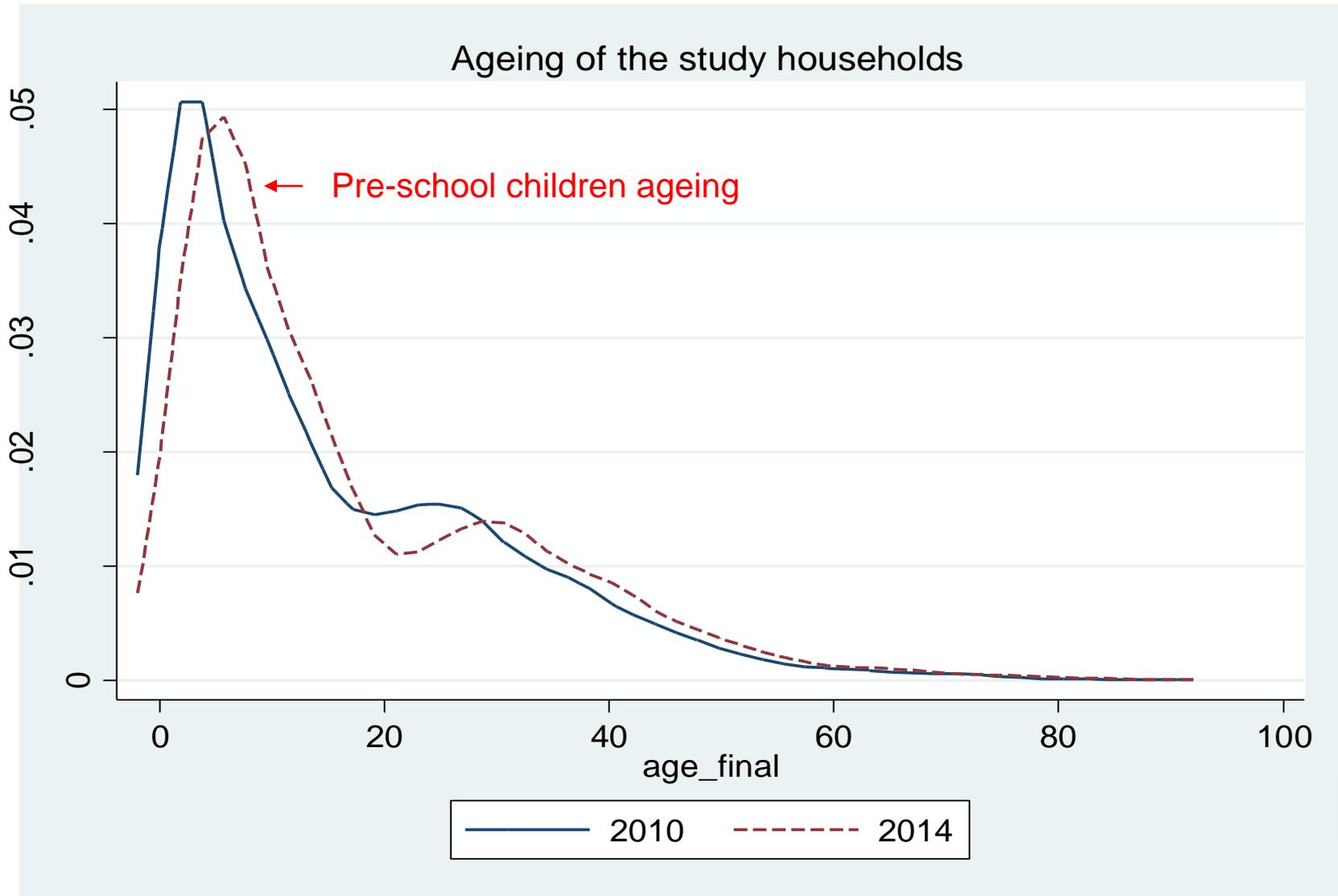
Age distribution of young children at 48-month wave
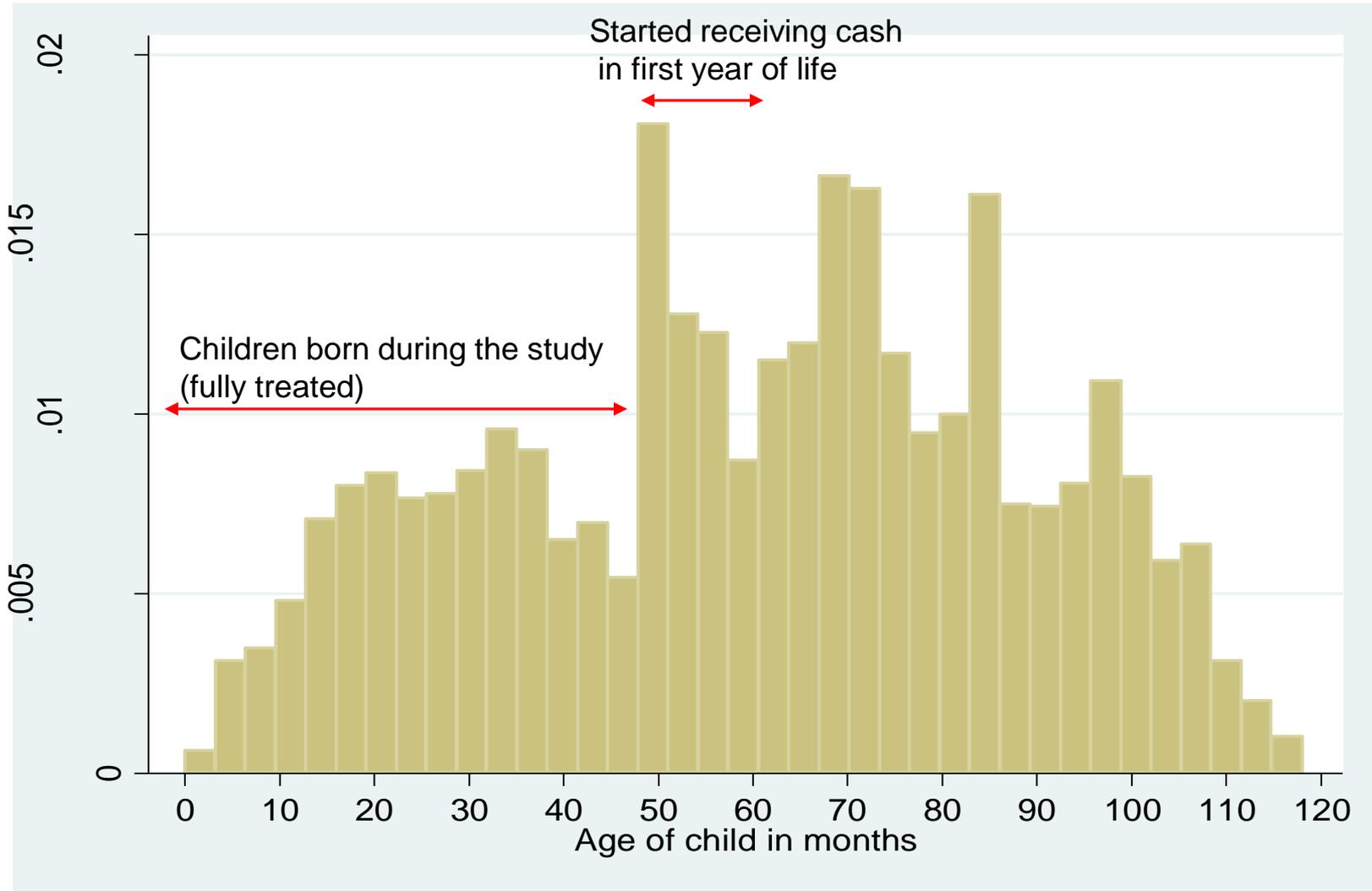
N=5,389 children

Core methodology: Compare trend in control group vs. trend in treatment group

Per capita consumption ZMW
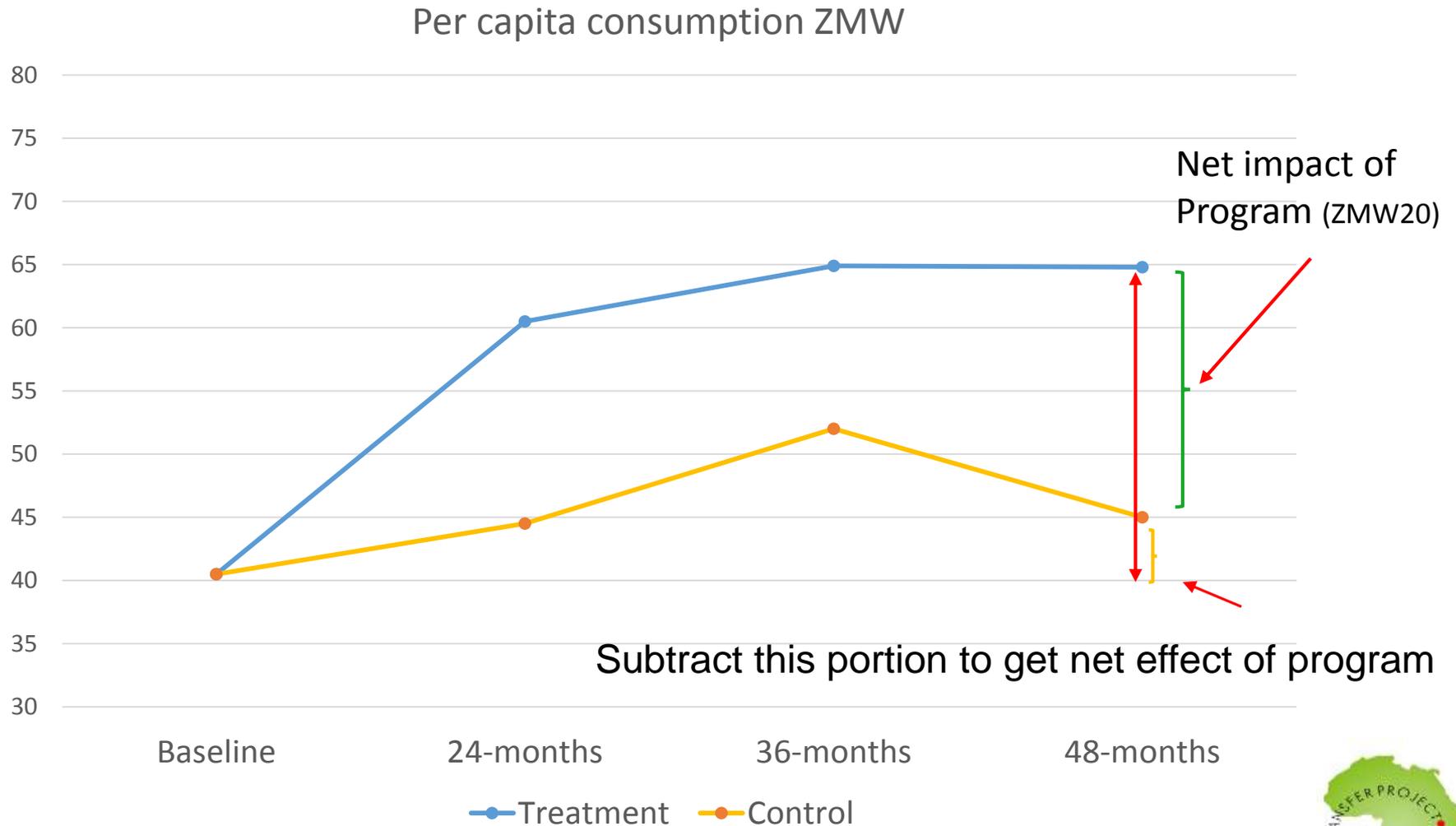
Can we expect an unconditional cash transfer to improve child nutrition?

- Systematic review by Manley, Gitter, Slavchevska (2013) covered 17 programs and 21 studies (CCTs and UCTs)
    - Did <u>not</u> find evidence of significant positive effects of CTs on nutritional status
    - Updated review by de Groot (2017) found similar results
- Evidence to date suggests that cash alone is not enough to improve child nutritional status—why is this?

Conceptual framework for child nutrition: Cash can directly affect food pillar, but may not affect other two pillars. Supply side factors influence many aspects of caring behavior and disease environment
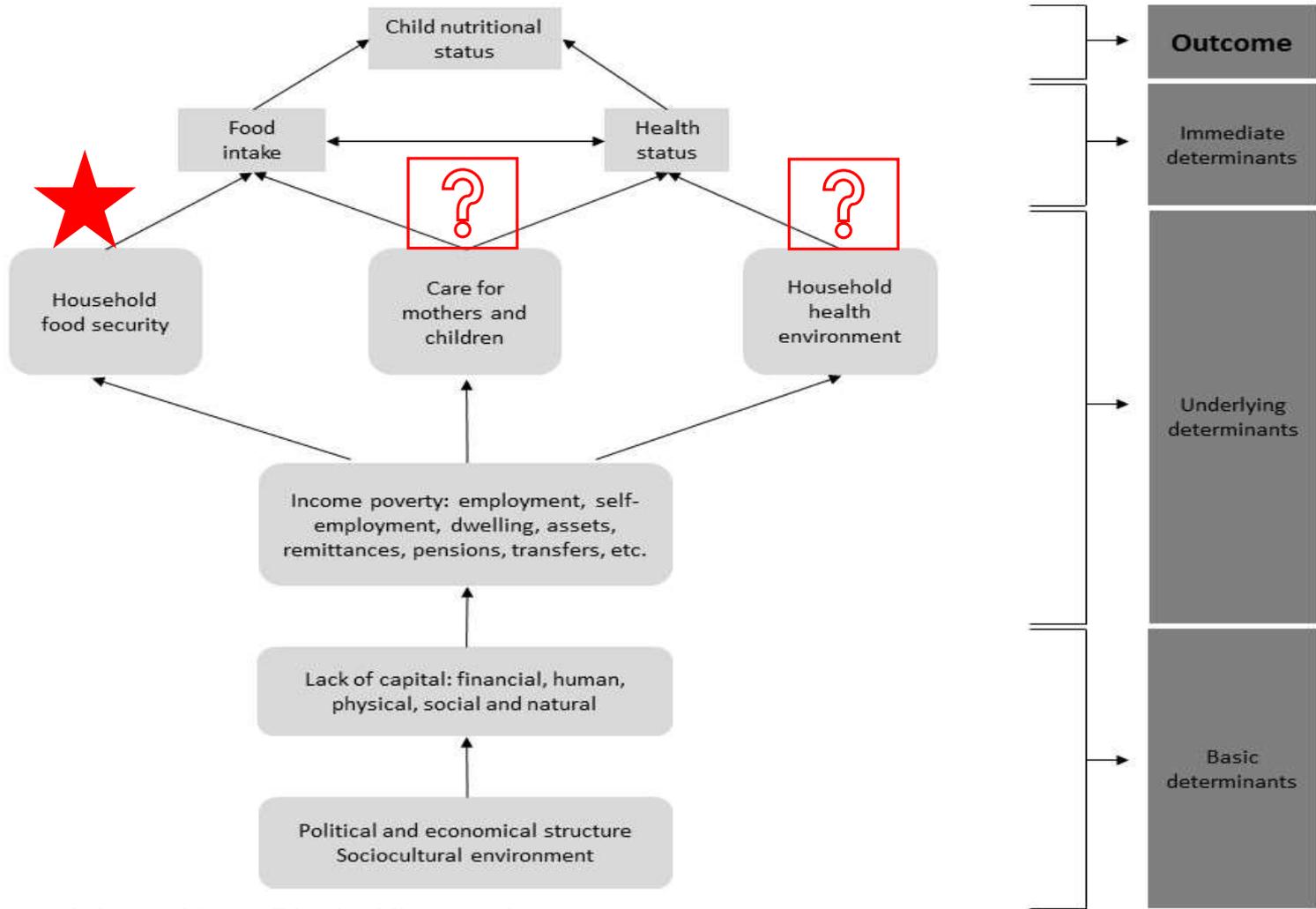
Source: Adapted from Black, Allen et al. (2008)

Main Results

Trends in stunting over time by study arm: No significant differences

Stunting rates for 0-36 month old children at each wave
(repeated cross-sections)
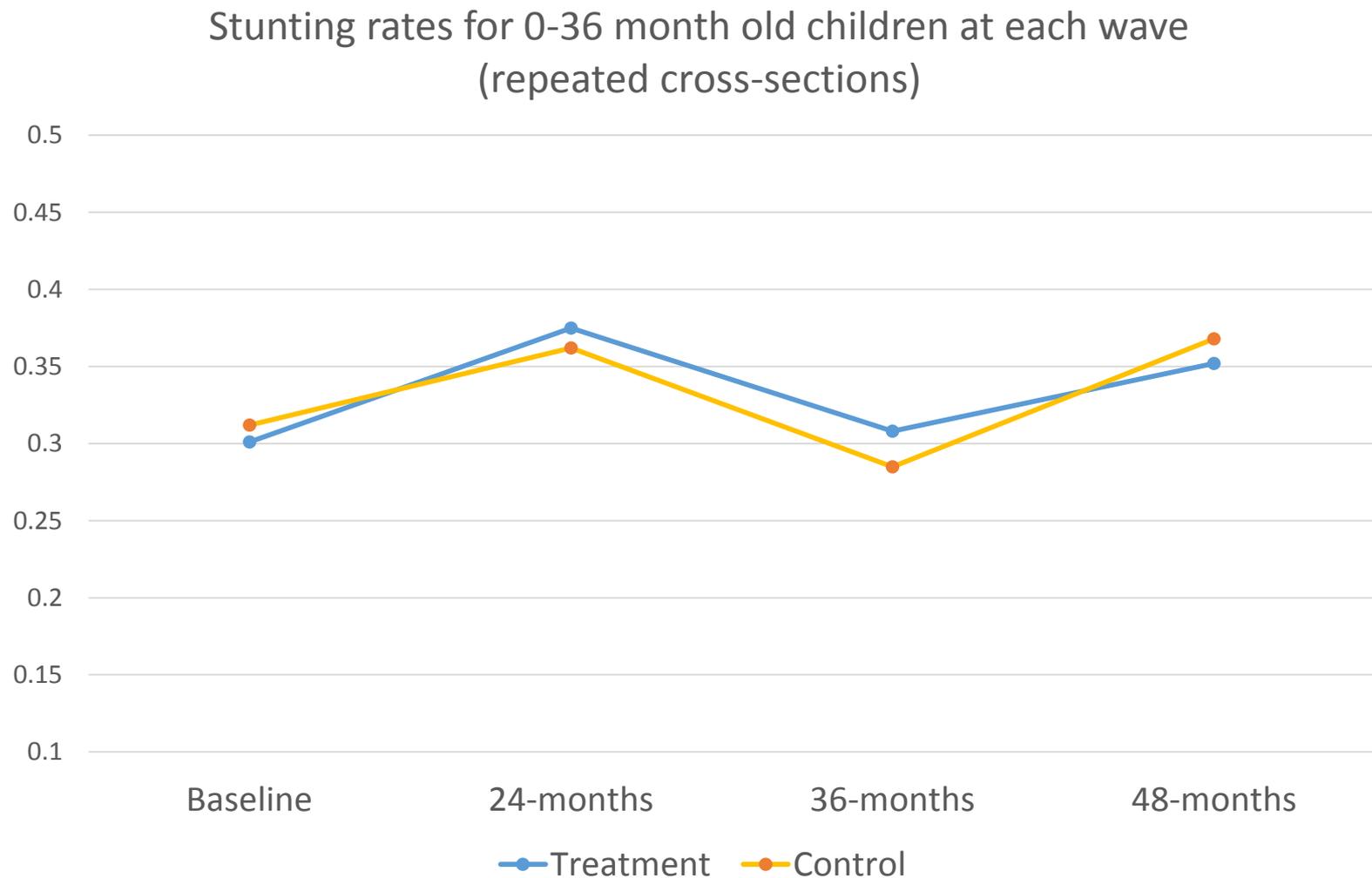
Trends in height for age z-score over time by study arm: No significant differences

HAZ for 0-36 month old children at each wave
(repeated cross-sections)
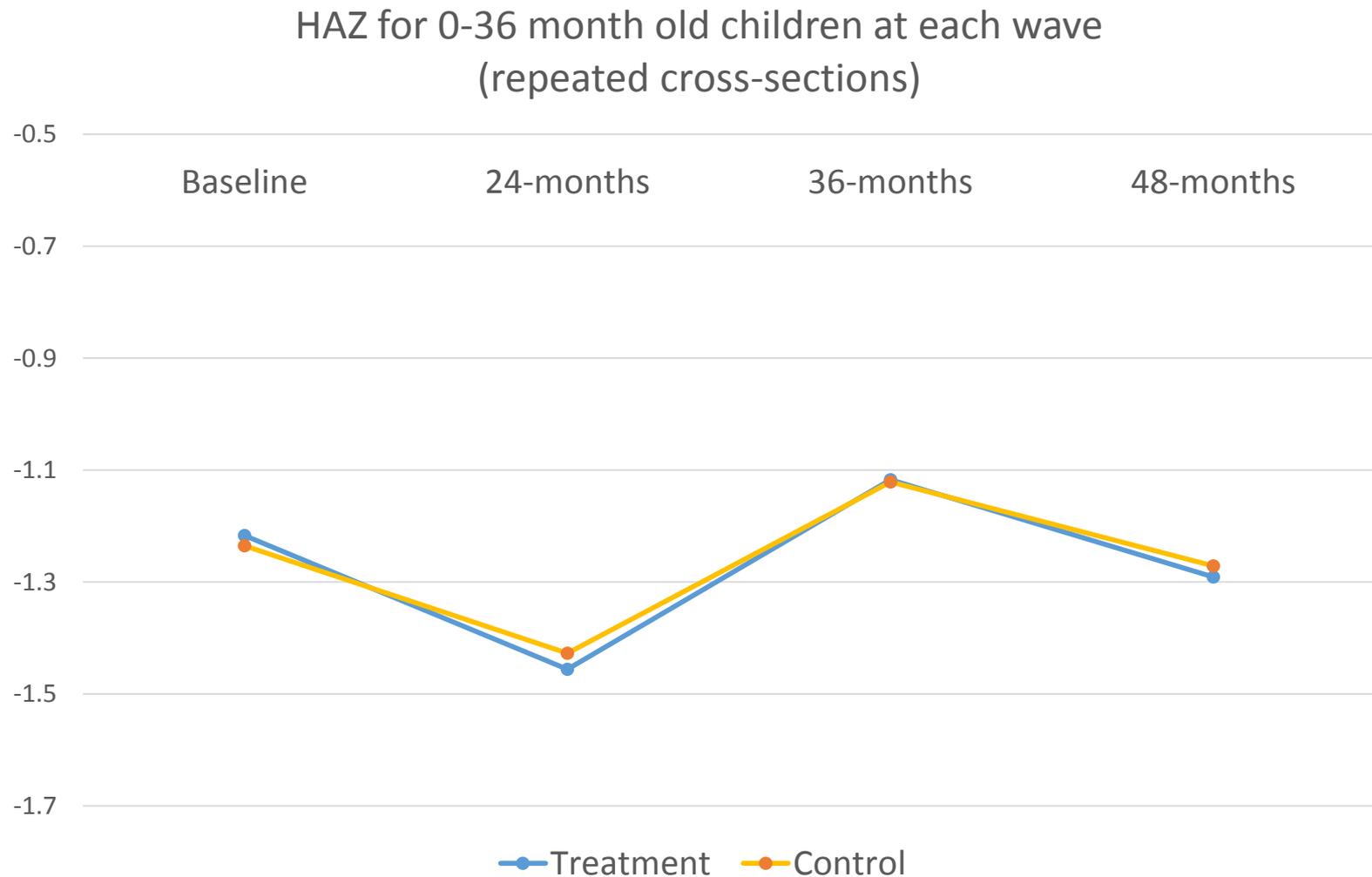
Regression estimates of impact on height for age z-score: no statistically significant effects

CGP impacts on HAZ at 48-month wave
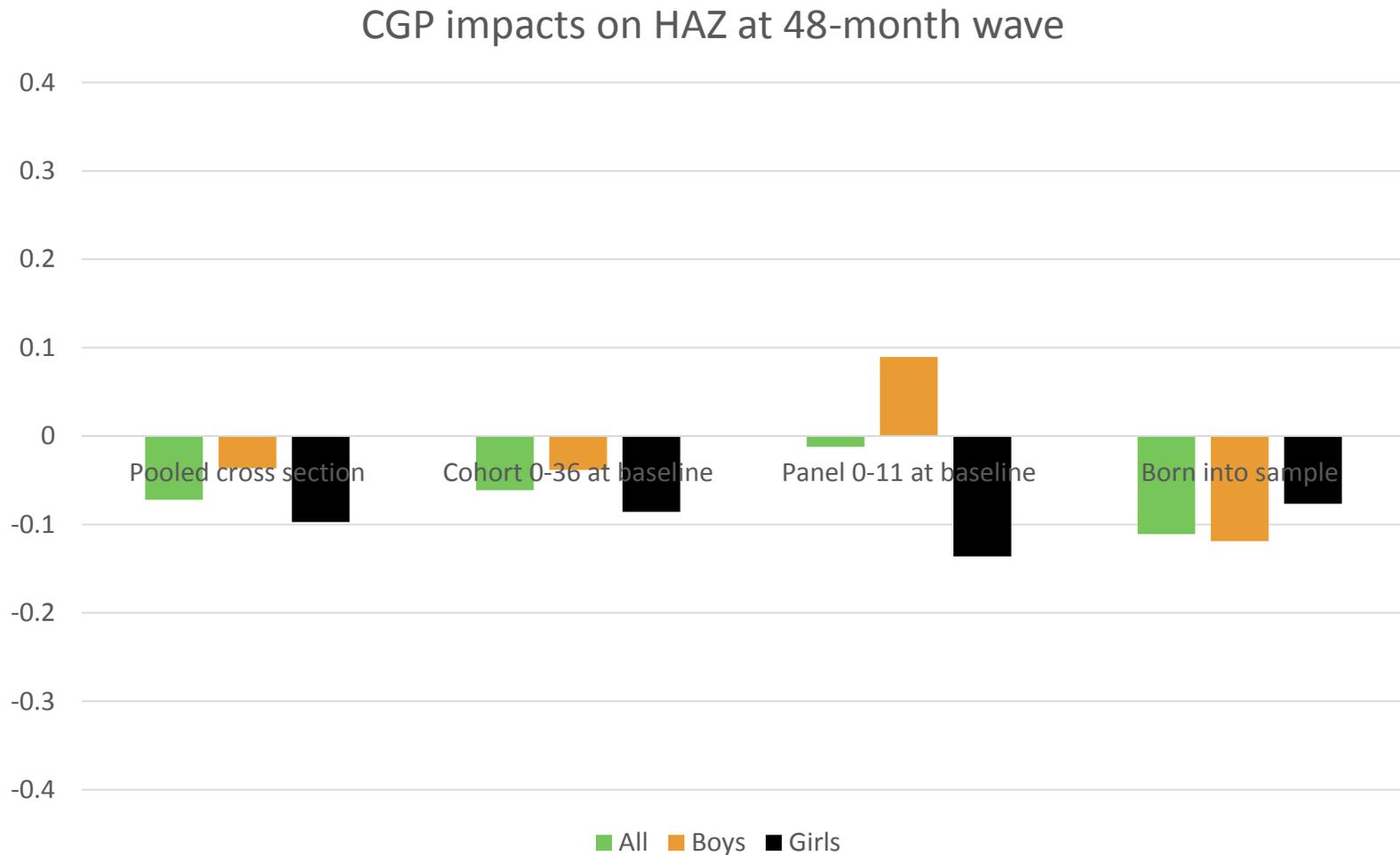
Regression estimates of impact on stunting (<-2 HAZ): no statistically significant effects

CGP impacts on stunting at 48-month wave
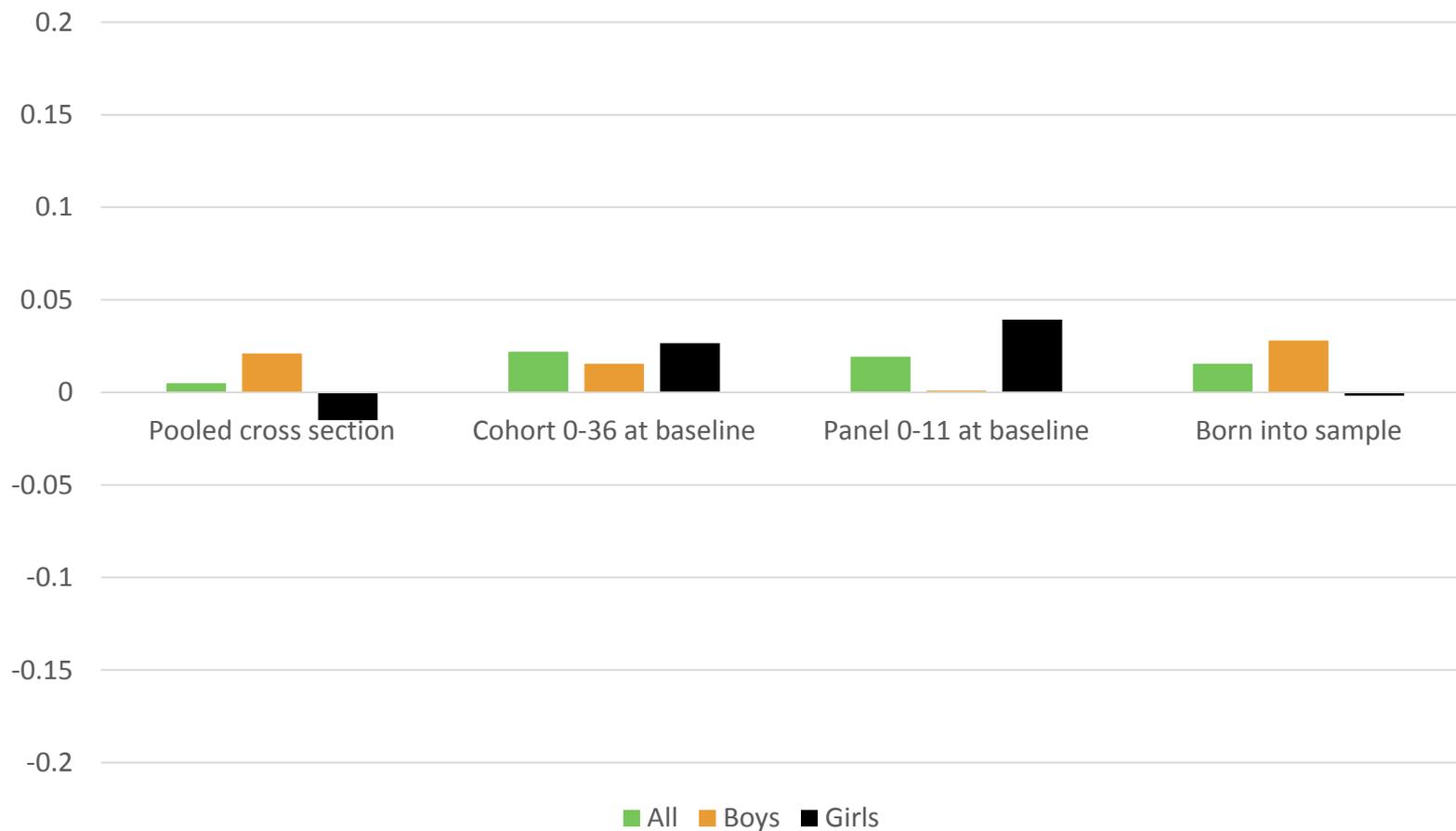
Did the CGP affect any of the three pathways to child nutrition? Yes!

	24-month	36-month	48-month
Plausible mechanisms			
Environmental inputs			
Household has access to toilet facilities	n/a	+	NS
Household uses clean water source	n/a	+	NS
Roof of dwelling made of purchased material	n/a	NS	NS
Floor of dwelling made of purchased material	n/a	+	NS
Wall of dwelling made of purchased material	n/a	NS	NS
Food inputs			
Child meal frequency (three or more) [19-32 percentage points]	+	+	+
Household food expenditure per capita [16-28 percent]	+	+	+
Child consumed food from four or more food groups	n/a	n/a	NS
Child consumed protein rich foods [13 percentage points]	n/a	n/a	+
Child consumed dairy products [10 percentage points]	n/a	n/a	+
Health inputs and behaviour			
Household owns a mosquito net	NS	NS	NS
Child sick during last two weeks	NS	NS	NS
Child has health card	NS	NS	NS
Child taken to well-baby or under-five clinic in last six months	NS	NS	+
Child received vitamin A dose	NS	n/a	n/a
Child received one BCG, three Polio, three DPT and one measles vaccines	NS	n/a	n/a

Supply-side constraints high in these communities: Health facility survey conducted in study CWACs at baseline

- Over 50% of health facilities in these CWACs are health posts or dispensaries (32 facilities total)

- Less than 20% of health facilities have at least one registered nurse on staff

- Only 6% had electricity, 8% had protected water source

Almost all provide well-baby clinic and ANC, fewer provide treatment for acute malnutrition

Services provided in 32 health facilities in study CWACs	
VARIABLES	mean
Outpatient consultations	0.677
Obstetric	0.484
Well-baby clinic	0.935
Antenatal	0.871
Family planning	0.774
Mobile clinic	0.387
Treatment for acute malnutrition for children	0.387
Child health day/ immunization campaign	0.742

Drugs, supplies available on day of survey in 32 health facilities

X.3: Drugs		Carry	In Stock
	(1)	**(2)**	**(2)**
VARIABLES	**N**	**mean**	**mean**
Insecticide treated mosquito nets	31	0.774	0.452
Meningitis vaccines	31	0.0968	0.0323
Polio vaccines	31	0.419	0.290
Measles vaccines	31	0.419	0.355
Tetanus vaccines	31	0.419	0.355
DPT vaccines	31	0.387	0.323
BCG vaccines	31	0.419	0.258
Antiretrovirals	31	0.258	0.226
Cotrimoxazole	31	0.387	0.226
Penicillin injection/tablets	31	0.258	0.194
Folic acid tablets	31	0.581	0.452
Fansidar	31	0.613	0.387
Coartem	31	0.516	0.258
Oral rehydration salts	31	0.677	0.452
Aspirin	31	0.742	0.355
Paracetamol/Panadol	31	0.774	0.355
Intrauterine devices	31	0.258	0.161
Contraceptive pills	31	0.581	0.452
Spermicide	31	0.129	0.0645
Condoms	31	0.806	0.548
Total number of supplies/medication	31	9.516	6.194

Other observations: CGP had very large productive effects, and improved overall household food security and consumption dramatically

Intent-to-Treat effects (CGP) - indices
Endlines 1&2 (24&36-months) at a glance
Effect size in SDs of the control group
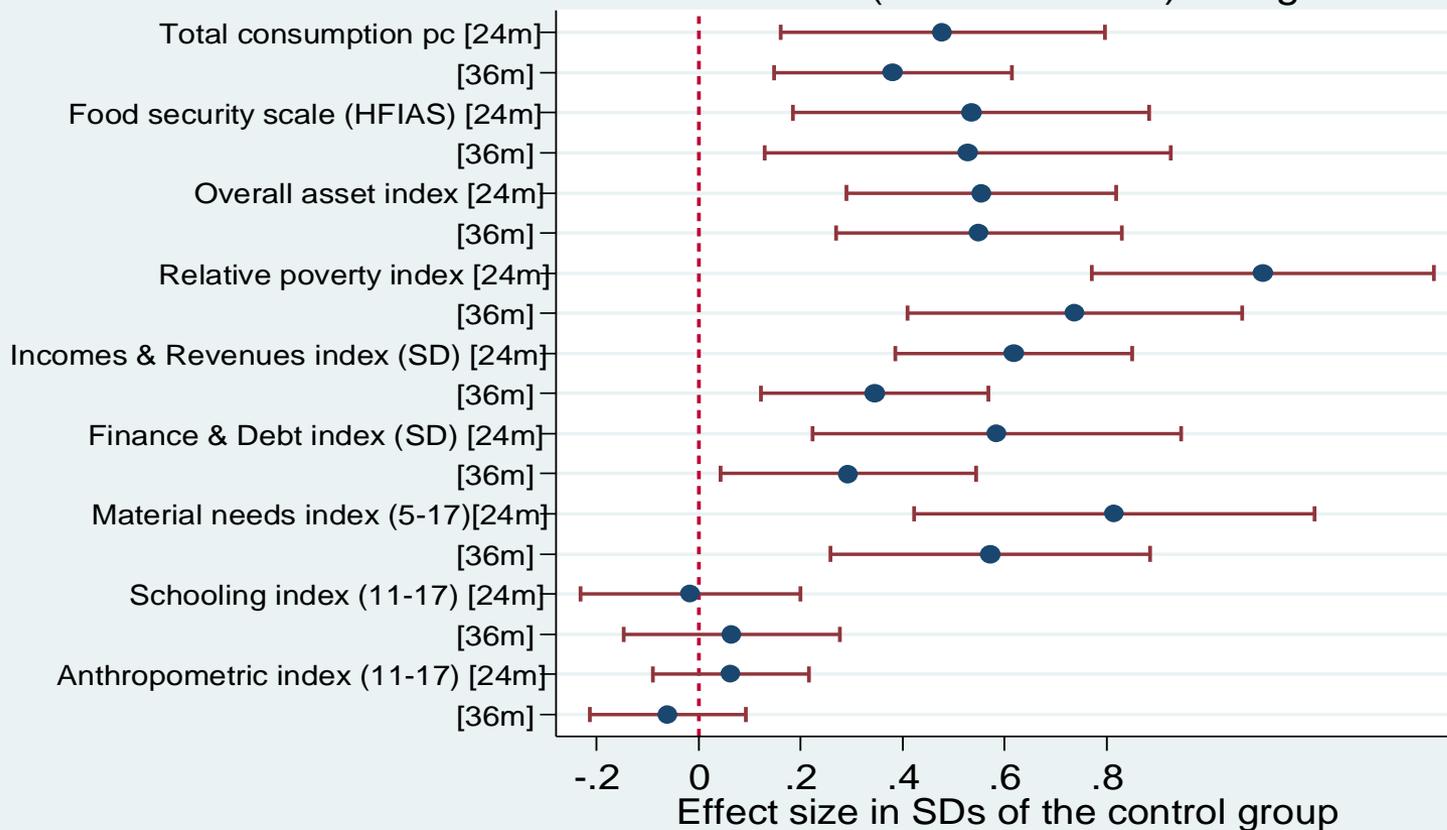
And even generated a significant income multiplier among households: every Kwacha transferred generated an additional 0.49 Kwacha

	CGP
Annual value of transfer (A)	**660**
Savings	61
Loan repayment	27
Consumption	800
Livestock value	48
Productive tools value	50
Total spending (consumption + spending) (B)	**986**
Estimated multiplier (B/A)	1.49

Impacts are based on econometric results and averaged across all follow-up surveys. Estimates for productive tools and livestock derived by multiplying average increase (numbers) by market price. Only statistically significant impacts are considered.

Discussion and programmatic implications 1

- CGP generated large impacts on virtually all aspects of household well-being, EXCEPT for child nutrition

- CGP did improve the food pathway, which is directly affected by cash: meal frequency, diet diversity, IYCF

- Other pathways are dependent on infrastructure (water and sanitation, electricity) and supply-side factors (health services) rather than cash, CGP could not be expected to affect these

Discussion and programmatic implications 2

- Key issue: Are nutritional inputs 'complementary'? Our results suggest that they are

- Improving food access alone, without improving hygienic practices like handwashing or the disease environment (potable water, latrines) cannot reduce chronic malnutrition

- Implication is that programs must work together to improve all three pathways at the same time

- Social Cash Transfer is addressing the food pathway; targeting SUN interventions to these households may have a better chance of reducing stunting due to input complementarity – is this possible?