

Undermining human capital accumulation: Evidence from micro and macro levels in Zimbabwe

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Objective

- To understand the impact of preschool undernutrition on subsequent human capital formation
- To estimate the lifetime income loss of individuals affected by chronic undernutrition as children
- To estimate the national economic costs of the failure to address child undernutrition

The data

- Rural households (land-reform beneficiaries & “control” communities)
- Long-term panel study (1983-84, 1987, 1992-2001, 2007-08, 2010, 2012)
- Anthropometric assessments on <6s (and their parents) & later educational attainments
- Data capture effects of violent conflict, repeated droughts & the advent of HIV/AIDS

Findings

- Children aged 12 - 24mo lose 1.5 - 2.0cm of linear growth following drought
- There is only a limited catch-up effect
- So growth faltering has a permanent effect

Findings, continued

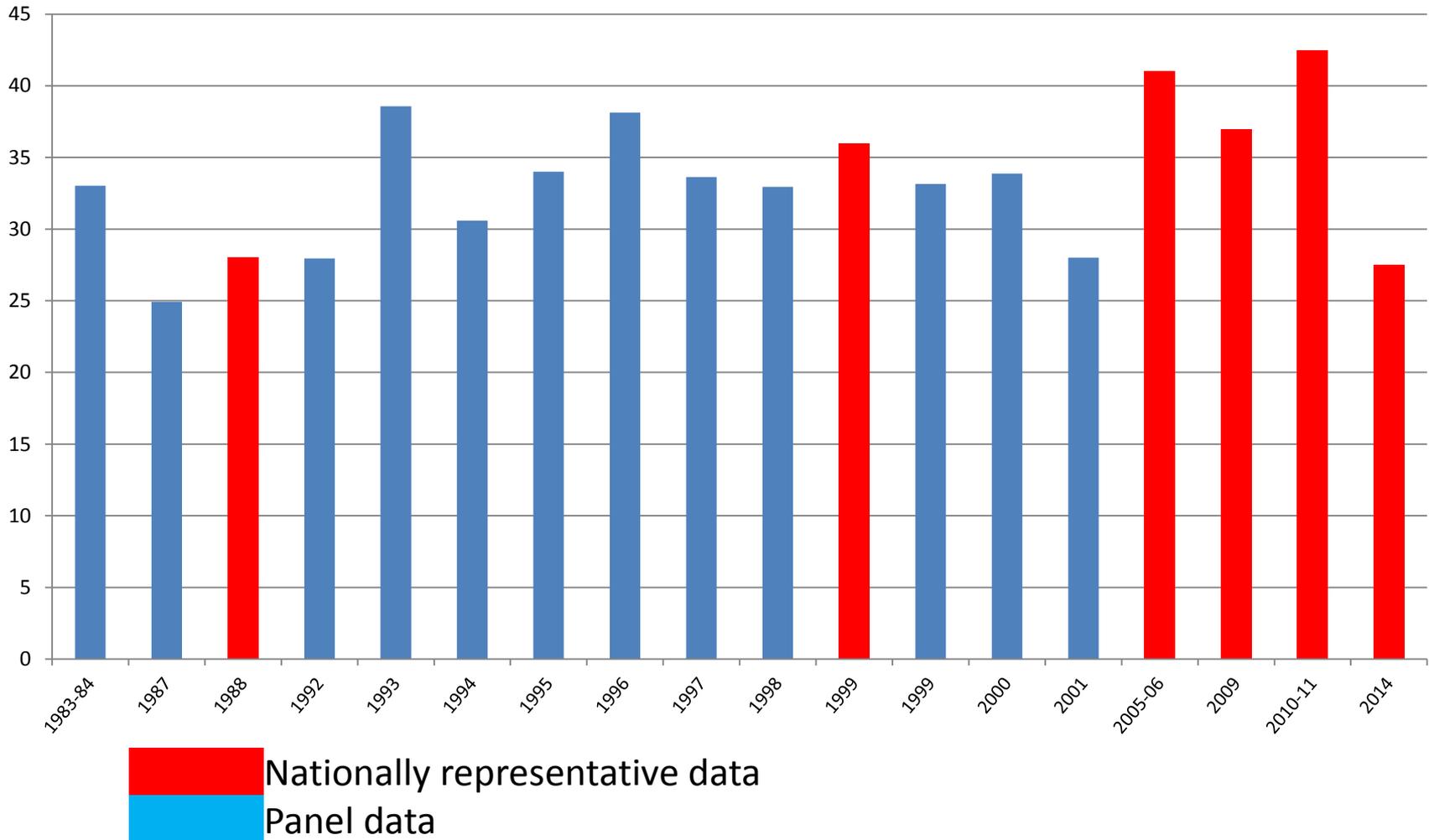
- Better height-for-age in preschoolers is associated with increased height as adolescents and years of schooling completed
- If a representative child in the sample had the stature of a median child in a HIC, by adolescence the child would be 3.4cm taller, have completed an additional 0.85 years of school and would have begun school six months earlier

Rates of return to education

Years of schooling	Per cent	
	Zimbabwe	SSA
Primary	7	5.4
Secondary	19	10.8
Post-secondary	31	17.0
Average years of education	9	n/a
Average rate of return	16	n/a

Source: Bigsten *et al.* (2000) & Appleton *et al.* (1996)

What is a shock, 1?



What is a shock, 2?

Year	Mean HAZ	% <-2.00	Mean HAZ
1984	-1.39	33.0	-3.06
1987	-1.15	24.9	-2.89
1992	-1.41	28.0	-2.98
1993	-1.60	38.6	-2.98
1994	-1,25	30.6	-3.00
1995	-1.48	34.0	-2.88
1996	-1.67	38.1	-3.12
1997	-1.36	33.6	-2.86
1998	-1.46	33.0	-2.91
1999	-1.47	33.1	-2.90
2000	-1.49	33.9	-2.82

Shocks?

Percentage of rural children of school-entry age who enter the first grade of primary school

70.6

Percentage of children of secondary school age currently attending secondary school or higher

47.7

Source: Unicef MICS 2014, pp32-3

Working conclusions

- What we have is not a series of shocks, the much-beloved natural experiments, but a national pandemic with milder & more severe manifestations.
- The same patterns are repeated in much/most of rural sub-Saharan Africa.
- The underlying causes will not be addressed by food security, consumption-smoothing, or the other conventional “remedies.”

Thank you!