Title: Does Basic Income Support Improve Healthy Ageing? Evidence from the Government of Malawi's Social Cash Transfer

Abstract submitted to Union for Africa Population Studies Conference 2024

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Governments around the world are concerned with the adverse effects of an aging population, which include the increased burden on the health care system, the caring responsibilities of families, and the decreasing quality of life of older citizens themselves. In the U.S. an important policy response to an ageing population is to focus more public health resources on research and associated clinical practices on diseases of the aged (e.g., Alzheimer's disease, cancer). In poorer countries with less developed health infrastructure, the burden of care as life expectancy increases falls on the extended family and includes direct costs of health care and the time cost of providing care. Government assistance to the elderly via old age 'social' or non-contributory pensions are widespread in Western Europe and are increasingly becoming a policy issue in low- and middle-income countries (LMICs). South Africa was one of the first LMICs to implement a large-scale non-contributory old age pension; more recently Mexico, Uganda, Kenya, and Lesotho are examples of LMICs that have adopted a social pension. And China's Dibao, the largest cash transfer program in the world reaching over 60 million¹ people, targets elderly citizens living in poverty. More generally, poverty targeted cash transfer programs have expanded rapidly in LMICs. The World Bank estimates that over a billion people in LMICs receive some form of government cash support, mostly unconditional poverty-targeted cash transfers.

This paper studies the Government of Malawi's Social Cash Transfer Program (SCTP), an unconditional cash transfer program targeted to rural ultra-poor households who are labor-constrained. The SCTP is the country's largest poverty alleviation program, currently reaching 7 percent of the population, and providing an average \$8 per month to eligible households (roughly 13 percent of consumption). The demographic eligibility criteria of the SCTP results in most recipients being elderly heads of household (63 percent are age 50 years or older). We use data from a long-term follow-up of an RCT to see whether this basic income grant has affected healthy ageing among household residents age 50+ at baseline.

The original RCT to evaluate the impact of the SCTP entailed a cluster-randomized trial with a baseline survey in 2013, a midline (2014), and endline (2015). In 2016 the control group entered the program, and we conducted a long-term follow-up in 2021, eight years after baseline. The 2021 survey focused on health and well-being outcomes of the elderly using measures of both physical and psychological health. We have a longitudinal sample of 2,033 elderly household members over eight years, with an early treatment group and a delayed entry group who entered the program three years later. For health outcomes collected at baseline we can estimate difference-in-difference estimates of program impact (8 versus 5 years of cash); for the suite of health indictors introduced in 2021, we provide single-difference comparisons relying on the fidelity of the original RCT for identification. We also estimate fixed-effects

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regressions to account for unobserved health endowments and include time dummies to account for heterogeneity I the ageing process over time, resulting in a doubly robust analysis.

Table 1 shows preliminary results of the impact of the SCTP on health outcomes among individuals 50 years and over living in households in the study sample. The first two columns show difference-in-difference (DD) estimates, and the last two columns show fixed-effect estimates, both estimated on individuals in the household during the entire study period. The 2015 impacts correspond to the endline of the original impact evaluation, before the control entered the program, while impacts in 2021 are between eight versus five years of transfer receipt.

In Panel A of Table 1, the fixed-effects (FE) estimates indicate treatment in 2015 is associated, on average, with a 12.4 percentage-point decline in having a disability, based on the Washington Group measure, and a 15.5 percentage-point decline in morbidity, and a substantial improvement in the quality-of-life scale by 2.86 points. Since 82 percent of recipients are women we show effects by sex, where there are no differences in 2015.

Turning to 2021 we see that in the full sample most of these positive health impacts disappear. However, an interesting pattern emerges whereby treatment effects in 2021 begin to show up for women. For example, by 2021 the treatment effect for women shows a reduction in the incidence of chronic illness by 15.7 percentage-points; women also report better health and score higher on the quality-of-life scale (10.4 percentage points and 2.254-point higher score respectively). When looking at health inputs we find statistically significant reductions in days of care which is consistent with improved health among women from the treatment group in 2021.

Descriptive analysis (not shown here) indicates whether there is a catch-up or fade-out effect in health outcomes across the treatment and control groups over survey waves. We find a fade-out in the initial improvement in self-reported health rating measures among the treatment group, while we find evidence of control group catch-up in morbidity and quality of life. We explore the source of the apparent larger protective effects for women, a key hypothesis being family structure and the availability of prime-age or younger members to provide care and earn income. Longer exposure to the cash treatment appears to induce an increase in the number of household members aged 12-17 among early treatment households. We are exploring other potential pathways to understand how the cash transfer has enabled an improvement in health among elderly women.

Our preliminary results suggest that basic unconditional income support can have a protective effect on the elderly, improving health across a diversity of outcomes, with larger effects in the long term for women relative to men. The results contribute to the evidence on the causal effect of income on healthy ageing, and our additional analysis will help us understand exactly how income operates to support healthy ageing, as well as differences by sex.

Table 1: Preliminary effects of basic income support on healthy ageing among recipients age 50+ years

	Double difference		Fixed effects		
	(1)	(2)	(1)	(2)	
VARIABLES	Impact in 2015	Impact in 2021	Impact in 2015	Impact in 2021	
Panel A: Effect of basic income support on all recipients age 50+ years					
Morbidity	-0.049	0.075*	-0.155***	-0.043	
	(0.045)	(0.042)	(0.051)	(0.056)	
Chronic illness	-0.059	0.059	-0.026	0.056	
	(0.057)	(0.049)	(0.071)	(0.058)	
Disability	-0.005	0.126***	-0.124**	0.014	
	(0.045)	(0.037)	(0.046)	(0.057)	
Better Health	0.050	0.007	0.088	0.047	
	(0.055)	(0.041)	(0.068)	(0.067)	
Quality of Life Index	2.248***	-0.321	2.857**	0.259	
	(0.846)	(1.015)	(1.262)	(1.710)	
Observations	4,034	4,026	2,033	2,033	

Panel B: Triple interaction for effect of basic income support on female recipients age 50+ years

	<u>Double difference</u>		Fixed effects	
Morbidity	-0.037	-0.099	-0.025	-0.085
	(0.063)	(0.063)	(0.062)	(0.061)
Chronic illness	-0.001	-0.161**	0.010	-0.157**
	(0.081)	(0.069)	(0.078)	(0.068)
Disability	-0.030	-0.123*	-0.005	-0.097
	(0.073)	(0.071)	(0.072)	(0.072)
Better Health	0.039	0.098*	0.036	0.104*
	(0.057)	(0.052)	(0.060)	(0.054)
Quality of Life Index	0.958	1.964	1.075	2.254*
	(0.868)	(1.164)	(0.890)	(1.199)
Observations	6,029	6,029	6,029	6,029

Note: Each row represents a separate regression. All regressions control for a set of baseline characteristics. Standard errors, clustered at the district level, are shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1