

The impact of the Zambia CGP on household economic activities and livelihoods

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Cash transfers targeted to poorest of the poor can also have productive impacts

- Beneficiaries of cash transfer programmes in Sub Saharan Africa predominately rural, most engaged in agriculture
- Exit path from poverty not necessarily the formal/informal labor market
- Impacts coming from changes in individual / household behaviour and structure of the local economy.
- Transfers can relax some of constraints brought on by market failure
 - Helping households manage risk
 - Providing households with liquidity
- Transfers can reduce burden on social networks and informal insurance mechanisms

The CGP programme

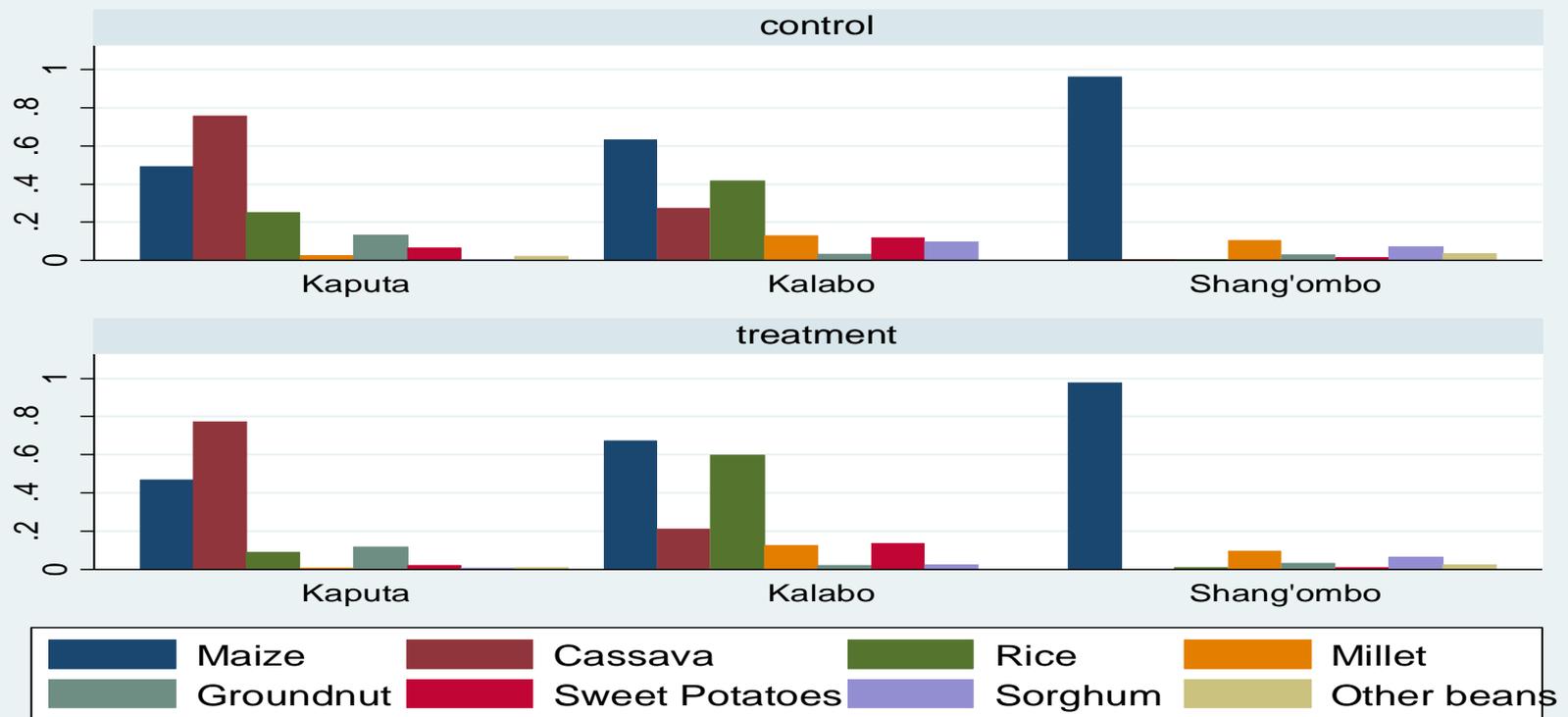
- Unconditional CT
- Targeting:
 - Geographical: Kaputa, Kalabo, Shangombo
 - Categorical: any HH with a child under 5 years
- Transfer amount independent of HH size (60,000 ZMK per month)
- Primary recipient is a female in the HH
- Primary goal: build human capital and improve food security

Study Design:

RTC with several levels of random selection

- 90 out of 300 Community Welfare Assistance Committees (CWACs) in the three districts randomly selected and ordered through a lottery
- Identification and selection of eligibles
- 28 HHs selected in each of 90 communities
- Baseline data collected before CWACs assigned to treatment/control group
- Randomization of communities done with flip of coin

Agriculture is fundamental part of livelihoods of CGP beneficiaries



Source: CGP Zambia

Share of households producing each crop
(over all households producing crops).
Baseline

Econometric analysis of impact of CGP on household productive activities

- High quality data, collected in the same season
- Randomization worked, no need of reweighting or matching estimators
- Diff-in-diff estimator for indicators available in both waves. Single diff estimator for outcomes only at follow-up.
- Attrition not relevant. To avoid any selection bias issues, reweight for inverse of predicted attrition probabilities.
- Some issues of contamination: ITT estimator, not pure ATT

Hypotheses to be tested

- Household investment in productive assets
 - Ownership of livestock and agricultural implements
- Household impact on agricultural production
 - Crop production, crop and livestock labor and input use
- Household impact on non agricultural production By household size
 - Operation of non farm business enterprise
- Impact on individual labor activities
 - Participation and intensity of wage labor (agricultural and non agricultural) and own farm labor

By gender

Large increase in proportion of households with crop input expenditures

	Impact	Baseline	Impact	Baseline	Impact	Baseline
	<u>All</u>		<u>≤5 HH members</u>		<u>>6 HH members</u>	
crop expenses	0.177	0.225	0.223	0.213	0.134	0.236
<i>seeds</i>	0.100	0.131	0.135	0.12	<u>0.067</u>	0.143
<i>hired labour</i>	0.054	0.029	0.072	0.024	<u>0.038</u>	0.034
<i>fertilizers</i>	0.032	0.009	0.034	0.007	0.029	0.012
<i>other exp</i>	0.151	0.104	0.153	0.105	0.150	0.103
N	4,596		2,336		2,260	

Bold <5% significant, underlined <10%

22% at base

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**Stronger in relative terms
for inputs with low baseline**

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Greater impacts for smaller HHs

Increase in the intensity of crop input use

	Impact	Baseline	Impact	Baseline	Impact	Baseline
	<u>All</u>		<u>≤5 HH members</u>		<u>>6 HH members</u>	
operated land (ha)	0.179	0.496	0.162	0.43	0.197	0.563
crop expenses	31,174	20,817	42,856	13,331	18,394	28,545
<i>seeds</i>	9,860	6,187	11,092	4,578	8,618	7,848
<i>hired labour</i>	8,417	7,093	14,682	2,845	1,155	11,479
<i>fertilizers</i>	7,606	1,413	8,924	721	6,499	2,127
<i>other exp</i>	5,226	6,092	7,967	5,124	2,092	7,091
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Big impact for seeds and fertilizers

Increase in the intensity of crop input use

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30% increase in land use, but still small average size

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Much bigger
for smaller HHs

Moderate increase in maize and rice production; decrease in cassava production

	Impact	Baseline	Impact	Baseline	Impact	Baseline
	<u>All</u>		<u>≤5 HH members</u>		<u>>6 HH members</u>	
maize	<u>49.5</u>	148.2	35.1	117.8	63.8	179.5
cassava	<u>-68.1</u>	146.6	-17.0	103	<u>-129.2</u>	191.7
rice	20.4	78.9	<u>39.4</u>	78.1	2.7	79.7
N	4,596		2,336		2,260	

Bold <5% significant, underlined <10%. Production in KGs.

Switching out of cassava production?
Drop in cassava coincides with consumption
results

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Moderate significant impact on other staple goods

Moderate increase in maize and rice production; decrease in cassava production

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Big impact on input use, but not on crop production.
1) Diffuse impacts at crop level? 2) Still not sufficient inputs? 3) Inefficient combination?

Increase in market participation

	Impact	Baseline	Impact	Baseline	Impact	Baseline
	<u>All</u>		<u>≤5 HH members</u>		<u>>6 HH members</u>	
% selling crops	0.120	0.226	0.144	0.210	0.092	0.242
% consuming crops at home	<u>0.059</u>	0.761	0.063	0.732	0.057	0.790
N	4,596		2,336		2,260	

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Moderate increase in home production.
Why? Food security achieved with
food purchases!

Explicit goal of CGP:

“Increase the number of households owning assets such as livestock”

	Impact	Baseline	Impact	Baseline
	<u>Proportion</u>		<u>Number</u>	
milk cows	<u>0.033</u>	0.053	-0.061	0.196
other cattle	0.084	0.094	0.263	0.417
chickens	0.154	0.404	1.234	1.949
goats	0.036	0.023	0.142	0.057
ducks	0.030	0.032	0.198	0.129
total	0.209	0.480	0.138	0.347
N	4,596		4,596	

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Objective met

Labour activities:

Cross-section	Impact	Follow-up	Impact	Follow-up	Impact	Follow-up
	<u>All</u>		<u>Males</u>		<u>Females</u>	
<u>participation of HH members in</u>						
wage labour	-0.091	0.497	-0.049	0.439	-0.136	0.405
<i>paid agriculture</i>	-0.145	0.337	-0.081	0.261	-0.174	0.292
<i>paid non-agriculture</i>	<u>0.037</u>	0.189	<u>0.040</u>	0.181	0.032	0.112
non-farm enterprise	0.171	0.378	0.120	0.178	0.155	0.327
<u>intensity of (days in)</u>						
<i>paid agriculture</i>	-13.75	35.7	-3.04	22.3	-12.37	18.6
<i>paid non-agriculture</i>	3.03	19.9	2.08	15.5	1.09	8.1
non-farm enterprise	1.57	2.65	0.62	0.94	0.98	1.76
N	2,296		1,764		2,282	

Bold <5% significant, underlined <10%.

Decrease in wage
employment driven by
agricultural labour ...

Labour activities:

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... especially female HH members

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Significant also on the intensity of labour

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So, what are these people now doing?

They are running an off-farm business!

No impact on child labour

	Impact	Baseline	Impact	Baseline	Impact	Baseline
	<u>All</u>		<u>Males</u>		<u>Females</u>	
total	0.047	0.525	0.083	0.512	0.016	0.537
paid	-0.018	0.043	-0.017	0.039	-0.014	0.047
unpaid	0.039	0.484	0.079	0.470	0.002	0.498
N	8,054		4,005		4,049	

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Consistent story in terms of positive impact on livelihoods

- CGP leads to increase in agricultural investment and capital accumulation
 - In both crop and livestock production
 - Production towards increased market participation instead of increased home consumption of output
- Impact on production is still moderate
- Shift from agricultural wage labour to non agricultural wage labor and off farm business

THANKS FOR YOUR
ATTENTION

Small, but significant, increase in agricultural implements

	Impact	Baseline	Impact	Baseline
	<u>Proportion</u>		<u>Number</u>	
axes	0.008	0.773	0.184	1.114
hoes	0.010	0.912	0.296	1.532
hammers	0.044	0.047	0.042	0.055
shovels	0.031	0.053	0.027	0.063
plough	0.036	0.065	<u>0.033</u>	0.07
N	4,596		4,596	

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Low base – impact
on proportion
owning

High base –
impact on
number

Labour supply, baseline

Adult, by sector

	female	male
<u>agriculture</u>	33.08	48.61
farming	32.67	41.79
fishing	0.10	6.46
forestry	0.31	0.35
wage labour	0.51	1.86
casual	26.11	24.79
self enterprise	17.29	8.50
not working	23.00	16.25

Children, by age groups

	female	male
<u>overall</u>		
5-10 yrs	40.47	35.73
11-13 yrs	68.39	69.94
14-18 yrs	78.51	76.92
5-18 yrs	54.32	50.91



Increase in the intensive margin of crop input use

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Moving from family labour to hired labour?

Increase in savings and loan repayments

	Impact	Baseline	Impact	Baseline	Impact	Baseline
	<u>All</u>		<u>HH size<6</u>		<u>HH size>5</u>	
HH saved cash	0.240 (5.73)	0.168	0.230 (4.78)	0.177	0.251 (5.54)	0.158
savings amount	54,371 (5.79)	19,392	55,198 (4.72)	19,820	50,610 (4.12)	18,949
HH repaid loan	0.017 (2.44)	0.010	0.011 (1.07)	0.009	0.020 (2.05)	0.011
loan repayments amount	-256 (-0.24)	895	-2,428 (-1.14)	1,170	1,444 (1.85)	611
N	4,596		2,336		2,260	

For everyone on both the extensive and intensive margin

Increase just for larger HH