

# Making the right livelihood choice: how do cash transfers help?

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# Motivation

- Over the past twenty years, a growing number of African governments have launched cash transfers programs.
- They aim at reducing poverty and vulnerability by improving consumption, nutrition, health status, school attendance and educational outcomes (Fizbein et al. 2009; Tirivayi et al. 2016).
- Impact on livelihood strategies: diversification or specialization?

# Motivation

- Cash transfer programmes may have in principle an ambiguous impact on livelihood diversification.
- On the one hand, households have access to additional monetary resources to be invested in income generating activities - more diversification in other activities with higher return.
- On the other hand, household may reduce their engagement in income generating activities characterized by low return - more specialization.

# Objectives of the paper

- Two main research questions:
  - 1 Does a cash transfers program enhance or hinder livelihood diversification versus specialization in a poor and rural setting in Zimbabwe?
  - 2 Does diversification increase household welfare measured by consumption expenditure?

# Objectives of the paper

- Contribution to the literature on both the determinants of livelihood diversification and the impact of diversification on household welfare.
- We also incorporate a gender dimension by distinguishing between female headed households (FHH) and male headed households (MHH).

# Survival-led vs opportunity-led diversification

- Households may diversify their livelihood strategy in response to incentives that may be classified in push and pull factors (Ellis, 2000; Reardon et al., 2006; Davis et al., 2010).
- Push factors drive a 'survival-led diversification', i.e. negative circumstances that may force households to seek additional livelihood activities within or outside the farm (Alobo Loison, 2016).
- Pull factors drive an 'opportunity-led diversification'.
- Pull factors are positive circumstances which may attract farm households to pursue additional livelihood activities to improve their living standard (Reardon et al., 2006; Winters et al., 2009).

# The welfare impact of diversification in SSA

- Positive relationship between non farm income and household welfare indicators such as income, wealth, consumption and nutrition (Alobo Loison, 2016; Barrett et al., 2001; Ellis, 1998-2005).
- This relationship is stronger for wealthier farm households (Davis et al, 2009; Bezu et al., 2012).
- Positive impact on farm productivity and food security (Kelley et al., 1996; Dercon and Krishnan, 1996; Davis et al., 2009).
- Mixed results on rural income distribution: reduction of income inequality (Adams, 2002) vs increase of income inequality (Block and Webb, 2001).

## Description of the program

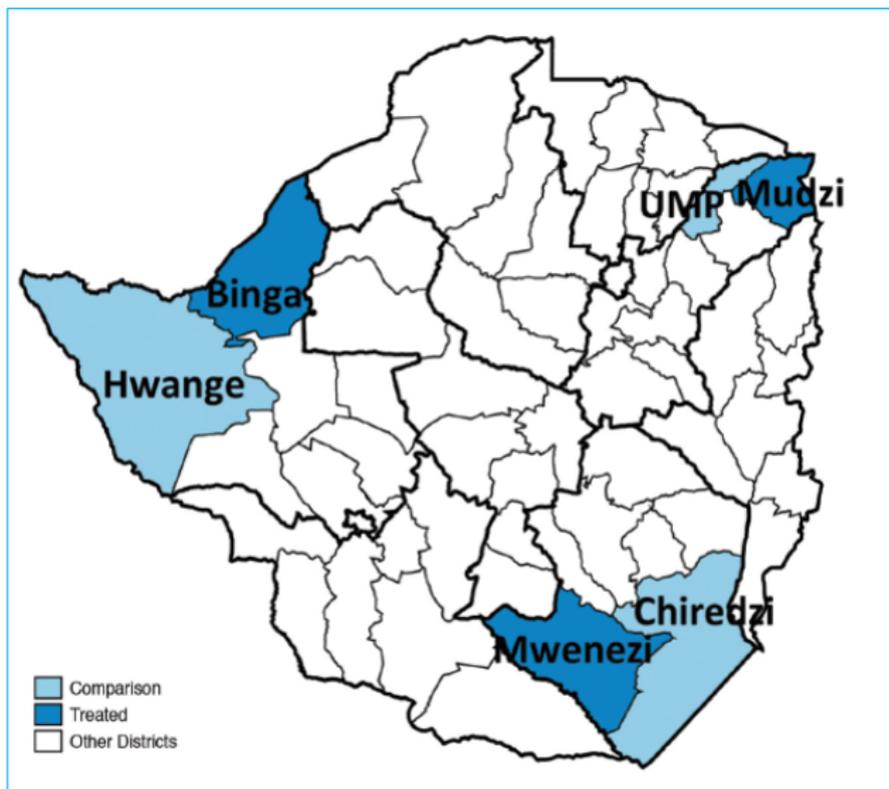
- The Zimbabwe Harmonized Social Cash Transfer (HSCT) Program is an unconditional cash transfer targeted to food-poor and labor-constrained households.
- Eligibility: labor-constrained families living below the food poverty line are selected using ZIMSTATS household census data.
- In January 2015, the HSCT covered 52 500 households.
- Transfer size ranges from USD 10 to 25, representing 20% of median household consumption expenditure.

## Results from other studies

- AIR 12-month impact evaluation report (AIR, 2014):
  - i Overall successful operational performance.
  - ii Wide range of social and economic benefits.
- PtoP 12-month impact evaluation report (Dewbre et al., 2015):
  - i Significant impacts on beneficiary agricultural activities: increased production diversification, shift in input use, livestock.
  - ii Significant increase of non-farm businesses.
- Qualitative study (OPM, 2013):
  - i Reduction of casual labour, especially for children.

# Data

- We use data collected for the impact evaluation of the HSCT program conducted by the AIR (2014).
- Data based on a twelve-month, longitudinal, non-experimental design study.
- Eligible households in Binga, Mwenzi ad Mudzi (treatment group) enrolled in the program after completion of baseline survey data collection (May-June 2013).
- Eligible households in UMP, Chiredzi, and Hwange (comparison group) were enrolled after follow-up data collection (May-June 2014).
- The final study sample comprises a panel of 2 630 households (1748 treated and 882 controls).



# Econometric model

- The econometric method consists of two set of equations linked via observed and unobserved characteristics:
  - a Choice of livelihood strategies;
  - b Impact of livelihood strategies on household welfare.
- Following Deb and Trivedi (2006), we develop a model for multinomial choice of livelihood strategies and a continuous choice of household consumption expenditure.

# Econometric model

- We specify a joint distribution of the endogenous choice of livelihood strategy and consumption expenditure using a latent factor structure.
- The livelihood strategy choice and the consumption equations include an indicator for the HSCT treatment to investigate the impact of cash transfers on both changes in livelihood strategies and consumption expenditure.

# Main income generating activities

		Agriculture Crops	Agriculture Livestock	Casual labor	Non-farm wage employment	Non-farm self-employment	Remittances and other
Whole	Comparison	89.56	77.06	43.88	11.37	11.99	59.64
	Treatment	89.73	76.00	42.64	10.10	11.89	56.03
FHH	Comparison	89.16	75.94	44.22	12.34	12.81	64.32
	Treatment	89.73	76.00	42.64	10.10	11.89	56.03
MHH	Comparison	90.39	79.38	43.16	9.35	10.30	49.95
	Treatment	89.73	76.00	42.64	10.10	11.89	56.03

## Notes:

- Crop production: at least one crop in the past rainy season;
- Livestock: livestock raised or owned in the past 12 months;
- Casual labor (maricho): both on-farm and non-farm labor supplied on a casual basis;
- Non-farm wage employment: at least one household member employed in wage, salary or commission on a regular basis;
- Non-farm self-employment: at least one household member owning a shop or operating a trading business;
- Remittances and other: remittances from relatives and friends and other public transfers (not including the HSCT transfers).

# Specialization is mainly on farm - Diversification is mainly survival-led

		Panel A: Specialization			Panel B: Diversification		
		On-Farm	Casual Labor	Non-farm	Opportunity-led	Survival-led	Mixed div.
Whole	Comparison	41.0	0.9	1.3	9.8	32.7	9.5
	Treatment	42.2	0.8	1.4	9.8	32.7	8.9
FHH	Comparison	39.7	0.9	1.7	10.2	32.0	10.4
	Treatment	42.8	0.7	1.2	8.6	33.3	8.5
MHH	Comparison	43.8	0.9	0.5	9.1	34.1	7.7
	Treatment	41.0	0.8	1.9	12.5	31.2	9.8

## Notes:

- Opportunity-led diversification: households engaged in both on-farm and non-farm activities;
- Survival-led diversification: households engaged in both on-farm activities and casual labor;
- Mixed diversification: households engaged in on-farm and non-farm activities and on casual labor.

## Household size, education and distance to markets play a crucial role

VARIABLES	Only On-Farm	Opportunity-led	Survival-led	Mixed
HH_female	-0.015 (0.026)	0.012 (0.018)	-0.003 (0.039)	0.005 (0.017)
land owned	0.001* (0.001)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Severely labor const.	<b>0.133***</b> <b>(0.044)</b>	<b>-0.079***</b> <b>(0.024)</b>	<b>-0.098***</b> <b>(0.030)</b>	0.003 (0.024)
HH_age	<b>0.002*</b> <b>(0.001)</b>	0.001 (0.001)	-0.001 (0.001)	<b>-0.002***</b> <b>(0.001)</b>
HH_widow	0.003 (0.028)	-0.002 (0.023)	-0.005 (0.040)	-0.013 (0.024)
HH_div_sep	0.047 (0.059)	-0.005 (0.034)	-0.018 (0.052)	-0.029 (0.026)
HH_highest_grade	<b>-0.013***</b> <b>(0.004)</b>	<b>0.007**</b> <b>(0.003)</b>	0.002 (0.006)	-0.002 (0.004)
# members: 0-5	<b>-0.052***</b> <b>(0.014)</b>	0.005 (0.018)	<b>0.033*</b> <b>(0.019)</b>	<b>0.021**</b> <b>(0.009)</b>
# members: 6-17	<b>-0.019**</b> <b>(0.008)</b>	0.001 (0.004)	<b>0.031***</b> <b>(0.008)</b>	0.003 (0.004)
BL0n1859	-0.001 (0.014)	0.000 (0.013)	-0.005 (0.013)	0.023** (0.010)
BL0n60	0.016 (0.024)	0.027* (0.015)	-0.019 (0.025)	0.018 (0.015)
km_input	-0.001 (0.001)	-0.001 (0.000)	0.001 (0.001)	0.000 (0.000)
km_bank	0.000 (0.001)	-0.000 (0.000)	0.000 (0.001)	<b>-0.001*</b> <b>(0.000)</b>
km_mkt	0.014 (0.011)	<b>-0.013***</b> <b>(0.004)</b>	0.007 (0.009)	-0.007 (0.005)
km_transport	-0.012 (0.013)	0.010 (0.006)	0.005 (0.012)	0.000 (0.008)
Constant	0.351*** (0.095)	0.045 (0.053)	0.302*** (0.107)	0.207*** (0.056)
Observations	2,563	2,563	2,563	2,563

# Independent variables and exclusion restrictions

Independent variables:

- Inclusion in the HSCT treatment group;
- Livelihood strategies at baseline;
- Interactions between livelihood strategies at baseline and treatment status;
- Household demographic characteristics;
- Lagged values of labor constraints and land size;
- Distance to the main markets.

Exclusion restrictions: lagged price levels of selected agricultural products at baseline (maize, rice, beans, beef).

# Positive impact of the HSCT on opportunity-led diversification which in turn increases consumption

	First Steps: Multinomial Logit						Second steps: Ordinary Least Squares		
	Opportunity-led diversification at follow-up		Survival-led diversification at follow-up		Mixed diversification at follow-up		Total consumption	Food consumption	Non-Food consumption
	Coeff.	Marginal eff.	Coeff.	Marginal eff.	Coeff.	Marginal eff.	Marginal eff.	Marginal eff.	Marginal eff.
Treatment (On-farm at base)	0.15 (0.311)	0.003	0.276 (0.191)	0.041	0.448 (0.342)	0.014	0.169 (2.516)	-1.202 (2.153)	<b>1.380**</b> <b>(0.607)</b>
Treatment (Opp-led div. at base)	0.170 (0.389)	0.014	-0.036 (0.397)	-0.010	-0.177 (0.791)	-0.003	1.252 (4.903)	-0.657 (2.478)	-0.965 (1.883)
Treatment (Surv-led div. at base)	-0.345 (0.347)	-0.019	-0.255 (0.227)	-0.046	0.201 (0.302)	0.014	0.769 (1.703)	0.433 (1.179)	0.311 (0.633)
Treatment (Mixed div. at base)	<b>0.990*</b> <b>(0.600)</b>	<b>0.085</b>	0.317 (0.427)	0.020	0.816 (0.577)	0.029	<b>3.467*</b> <b>(2.112)</b>	1.559 (1.637)	<b>1.923**</b> <b>(0.954)</b>
Opp-led div. at follow-up							<b>9.224***</b> <b>(2.238)</b>	<b>5.598***</b> <b>(1.178)</b>	<b>2.821**</b> <b>(1.149)</b>
Surv-led div. at follow-up							0.299 (1.670)	0.695 (1.158)	1.643 (1.101)
Mixed div. at follow-up							<b>3.685*</b> <b>(2.233)</b>	<b>3.085*</b> <b>(1.783)</b>	1.267 (0.866)
Opp-led div. at base	<b>1.249***</b> <b>(0.418)</b>	<b>0.095</b>	0.405 (0.407)	0.012	1.203 (0.839)	0.056	2.474 (2.490)	0.355 (1.531)	2.109 (1.685)
Surv-led div. at base	0.474 (0.347)	0.005	<b>1.437***</b> <b>(0.328)</b>	<b>0.242</b>	<b>1.179***</b> <b>(0.336)</b>	<b>0.030</b>	-1.769 (2.022)	-1.533 (1.528)	-0.610 (0.709)
Mixed div. at base	0.307 (0.667)	0.012	<b>1.096**</b> <b>(0.398)</b>	<b>0.174</b>	<b>1.416**</b> <b>(0.554)</b>	<b>0.057</b>	<b>-4.321*</b> <b>(2.635)</b>	-3.103 (1.999)	-1.495 (0.838)

# No HSCT impact on livelihood strategies in FHH - strong impact in MHH

	First Steps: Multinomial Logit						Second steps: Ordinary Least Squares		
	Opportunity-led diversification at follow-up		Survival-led diversification at follow-up		Mixed diversification at follow-up		Total consumption	Food consumption	Non-Food consumption
	Coeff.	Marginal eff.	Coeff.	Marginal eff.	Coeff.	Marginal eff.	Marginal eff.	Marginal eff.	Marginal eff.
Treatment FHH (On-farm at base)	0.204 (0.335)	0.008	0.229 (0.171)	0.038	0.452 (0.356)	0.021	0.317 (2.978)	-1.732 (3.203)	<b>2.019**</b> <b>(0.797)</b>
Treatment FHH (Opp-led div. at base)	-0.040 (0.528)	-0.002	-0.484 (0.540)	-0.019	-0.321 (1.080)	-0.008	2.994 (7.013)	-0.102 (2.650)	-1.582 (2.495)
Treatment FHH (Surv-led div. at base)	-0.155 (0.445)	-0.011	-0.010 (0.274)	0.033	0.249 (0.357)	0.014	0.591 (2.075)	0.725 (1.514)	-0.242 (0.781)
Treatment FHH (Mixed div. at base)	0.301 (0.692)	0.343	0.047 (0.418)	-0.173	0.943 (0.787)	0.020	5.399 (2.842)	2.770 (1.996)	<b>2.727**</b> <b>(1.086)</b>
Treatment MHH (On-farm at base)	-0.034 (0.408)	-0.014	0.277 (0.272)	0.041	0.326 (0.485)	0.007	-0.480 (2.368)	-0.670 (1.853)	0.226 (1.063)
Treatment MHH (Opp-led div. at base)	0.419 (0.585)	-0.002	0.932 (0.619)	0.218	0.037 (0.938)	-0.018	-1.730 (5.601)	-1.644 (3.949)	-0.049 (2.832)
Treatment MHH (Surv-led div. at base)	-0.604 (0.595)	-0.010	-0.703* (0.408)	-0.118	0.131 (0.536)	0.019	1.867 (2.892)	0.339 (1.901)	1.637 (1.120)
Treatment MHH (Mixed div. at base)	<b>2.654**</b> <b>(1.372)</b>	<b>0.397</b>	0.963 (0.815)	-0.025	0.636 (0.861)	-0.013	-1.068 (4.295)	-1.187 (3.104)	-0.089 (2.092)
Opp-led div. at follow-up							<b>9.348***</b> <b>(2.189)</b>	<b>5.688***</b> <b>(1.183)</b>	<b>2.881**</b> <b>(1.147)</b>
Surv-led div. at follow-up							0.460 (1.645)	0.752 (1.158)	1.709 (1.048)
Mixed-div. at follow-up							<b>3.667*</b> <b>(2.180)</b>	<b>3.123*</b> <b>(1.754)</b>	1.244 (0.871)

# Conclusions

- The HSCT program induces a switching between mixed diversification at baseline to opportunity-led diversification at follow-up.
- This means that cash transfers induce households already diversifying to abandon casual labor.
- High degree of "persistence" in livelihood strategies.
- Cash transfers increase non-food consumption expenditure for households engaged in on-farm activities and on mixed diversification at baseline.
- Opportunity-led diversification and mixed diversification at follow-up increase consumption expenditure for both food and non-food.

# Conclusions

## In MHHs:

- The HSCT treatment increases the probability that households engaged in mixed diversification at baseline switch to opportunity-led diversification at follow-up.
- The HSCT treatment reduces the probability that male-headed households engaged in survival-led diversification at baseline will maintain the same livelihood strategy at follow-up.
- Both effects imply a reduction of casual labor.

## In FHHs:

- The HSCT treatment does not seem to have any impact on changes in livelihood strategies.
- Other variables seem to play a role: education, labor constraints and land size.

# Conclusions

- As far as the analysis of the livelihood strategy choices on household welfare is concerned, the impact of the HSCT treatment in FHHs is actually stronger than that on MHHs.
- The treatment has a positive effect on non-food consumption expenditure for FHHs that at baseline engaged in on-farm activities or were engaged in mixed diversification.
- Treatment in MHHs does not seem to have any direct impact on consumption expenditure.
- In MHHs, the treatment seems to exert an effect on consumption only through its impact on livelihood strategies.

# Thank you

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For more information on our work, please visit:

Transfer Project: [▶ link](#)

From Protection to Production [▶ link](#)

# References

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