

Measuring the impact of cash transfer programs on the local rural economy: combining household survey data with a business enterprise survey

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A new research agenda on cash transfers programs

- Massive expansion of cash transfer programs in Sub Saharan Africa to poor and vulnerable households
- Beyond impacts on human development, cash transfers can foster broader economic development, including agriculture
 - Through changes in household behavior (labor allocation and investment in productive activities) and through impacts on the local economy
- Bulk of beneficiaries of these programs live in rural areas, and most are engaged in agriculture.
- Yet most cash transfer impact evaluation surveys collect little information on household agricultural activities



And there are a lot of new rigorous cash transfer impact evaluations

- Malawi SCT
 - Mchinji pilot, 2007-2009
 - Expansion, 2011-2013
- Kenya CT-OVC
 - Pilot 2007-2011
 - Expansion, 2011-2013
- Mozambique PSA
 - Expansion, 2008-2009
- Zambia
 - Kalombo pilot, 2005
 - Monze pilot, 2007-2010
 - Expansion and child grant, 2010-2013
- South Africa CSG
 - Retrospective and expansion, 2010-2013
- Ethiopia
 - PNSP, 2006-2010
 - Regional minimum social protection package, 2011-2013
- Ghana LEAP
 - Pilot, 2010-2012
- Lesotho CGP
 - Pilot, 2011-2012
- Tanzania, TASAF
 - Pilot, 2010-2011
- Uganda, begins in 2011
- Zimbabwe, begins in 2012
- Niger, begins in 2012



Why should we care?

- Contribution to policy debate
 - Understand overall contribution of CT programs to poverty reduction (cost-effectiveness) in rural areas
 - Political economy: more support for CT programs
 - Promote inclusion as part of rural and agricultural development strategy
 - Link agriculture to social protection
- Contribution to program design
 - Most programs not designed with productive dimension or agriculture in mind
 - Evidence on how households spend, invest, or save can help strengthen design and implementation
 - Confront potential synergies and constraints (eg, child labor)
 - Link to graduation strategies, “productive insertion of beneficiaries” or welfare-to-work transitions



From Protection to Production project

- FAO–UNICEF ESARO project focusing on understanding the economic impacts of cash transfer programs
 - Providing technical and analytical assistance to government agencies carrying out impact evaluations
 - Financing marginal cost of collecting additional information
 - Formally working with 6 countries in Sub Saharan Africa
 - Lesotho, Malawi, Ethiopia, Zimbabwe, Kenya and Ghana
 - Though we provide support to any government administered CT who requests it



Partnerships

Guiding principle:

piggy-back on/add value to existing impact evaluations

- Component of overarching “Transfer Project”
 - UNICEF, Save the Children UK, University of North Carolina
- Strong partnership with Government and UNICEF country offices currently implementing impact evaluations
 - Plus DFID and World Bank country teams
- Collaboration with independent external evaluators (international firms and national research institutions)

- Regional partners



Strengthening data collection and analysis in ongoing impact evaluations

- Analysis of household decision making
- Simulation of local economy impacts
- Integration of qualitative/quantitative design and methods
- Increase capacity of program managers and policy-makers



Analysis of household decision making

- Design, pilot and supervise implementation of additional modules in household surveys
- Analysis of decisions regarding
 - Asset accumulation, productive activities and labor allocation
 - Climate change adaptation
 - Risk coping strategies and risk management
 - Extent of reciprocal exchange
- FAO team will lead data analysis



Household level analysis: evaluation framework

- Experimental design with random allocation of treatment and control groups, pre and post treatment panel surveys
- Difference and difference estimator
$$Y_i = \beta_0 + \beta_1 I_i + \beta_2 t + \beta_3 (t * I_i)$$
- Adding control variables or PSM when issues with randomization



Household level analysis: data requirements

- “Standard” modules
 - Labor, crop and livestock production and non farm business activity; asset ownership; credit access and use, etc.
- Social networks
 - Cash/in kind/labor exchanges
- Time use
 - Adults and children
- Attitudes towards risk
 - Hypothetical situations
- Climate change
- Risk coping strategies (pieces of other modules)



Looks straightforward, but..... this is main challenge of project

- Convincing managers to collect additional information in context of overcrowded survey instrument
- Difficulties particularly acute because:
 - Most CT programs located in ministries of social welfare and the like
 - Most government officials and development staff associated with program are from social sectors
 - Most firms contracted to carry out evaluation analysis have scant experience in livelihood dimension of rural households
- Long process of negotiation
 - Force of argument and \$\$\$\$\$



Simulation of local economy impacts

- Construct village SAM/CGE models for cash transfer program areas in each country
- Analytical work led by Prof Ed Taylor and team at UC Davis



Local economy analysis: evaluation framework

- Village SAM/CGE model simulates impact of cash transfer on local economy
 - social accounting matrix (SAM)
 - computable general equilibrium (CGE)
 - One or multiple SAMs, linked according to income and expenditure accounts, and nested in CGE model
- SAM captures social and economic structure of village/local economy, including types of households
- CGE Parameters (Cobb-Douglas production functions, consumer demand) calculated directly from SAMs or estimated from household survey data



- SAM/CGE simulations provide
 - Insights as to economic channels/linkages through which a cash transfer operates
 - Indication of multiplier impacts of household level transfer
 - CGE modeling methods allow for flexibility in terms of market functioning—non perfectly functioning markets accentuate multiplier impacts
 - Comparison of alternative program designs
 - Assessment of heterogeneity of impacts, for example, across different market environments



Local economy analysis: data requirements

- Filling the SAM
 - Business production, revenues, costs, input use, hired and household labor, capital
 - Input-output matrix of all transactions in local economy (revenues, consumption, factors of production, etc)
 - To/from whom and where on all cash transactions (business sales and purchases, consumer purchases)
- Two data sources:
 - Business enterprise survey in areas where the program operates
 - Household survey



Local economy analysis: data requirements

Incomes	Expenses					
	1. PRODUCTION	2. FACTORS	3. INSTITUTIONS	4. CAPITAL	5. REST OF WORLD	TOTAL
1. ACTIVITIES Staples Other Ag Livestock Services	(a) Intermediate Inputs (Input-Output Matrix)		(g) Home Consumption	(h) Implicit Investment or Storage	(i) Sales inside and outside ZOI	(e) Total Production Value
2. FACTORS Family Hired Labor Land Capital	(b) Value-Added from Production				(o) Wages, rental income	Total Factor Receipts
3. INSTITUTIONS Households Government	(c) Indirect Taxes	(f) Household Value-Added Income	(j) Public and private transfers		(k) Migrant remittances	Total Household Income
4. CAPITAL			(l) Savings (incl. investments)			Total Savings
5. Rest of WORLD Rest of ZOI Rest of Country Rest of World	(d) Purchased inputs by place purchased		(m) Market Consumption	(n) Investment good purchases, formal and informal savings		Total Market Purchases
TOTAL	(e) Total Production Expenditures	Total Factor Payments	Total Household Expenditures	Total Investments	Total Market Sales	Total Incomes and Expenditures



Business enterprise survey: initial steps

- Determine zone of influence (ZOI)
 - Village or cluster of villages?
 - How to deal with businesses on the periphery, rotating markets, itinerant traders
 - Trade off: wider you search, weaker the linkage
- Non agricultural business only
 - Agricultural activities adequately captured in household survey



Business enterprise survey: sampling—as random as you can

- Stratify by major business types
 - Distribution of non-agricultural businesses
 - Categorize: retail, manufacturing, services
 - Determine sample size
- Data source for stratification
 - Secondary data, census of program communities, community survey listing
- Data source for sample frame
 - Census or community survey listing
- Last option: revealed stratification and sample frame
 - Update as survey progresses



Household survey: some simple modifications

- Captures three types of data:
 - Household agricultural enterprises
 - Household non-agricultural enterprises
 - All interactions in which cash is exchanged
 - Consumer purchases
 - Transfers
 - public and private, incoming and outgoing
 - Wage labor
 - Credit and savings



Household survey: data challenges

- Annualization of seasonal values
 - Food expenditure/consumption
 - From consumption last week to roughly gauging annual consumption
 - For how many months (or weeks) of previous 12 months (or 52 weeks) did you consume [food item]?
 - How much do you normally spend per week on [food item] when you consume [food item]?
 - Wage employment
- Inserting numerous “where” questions
 - Or include summary matrix at survey end
- Expanding impact evaluation sample to include non eligible households



Moving forward

- PtoP project is making two relevant contributions
 - A new initiative in merging household surveys geared towards poverty and social outcomes with agricultural content
 - Facing the challenge in introducing standard economic activity modules into ongoing cash transfer impact evaluations
 - We welcome advice
 - Local economy analysis of cash transfer programs, using primary data collection linked to impact evaluation, is an innovation



Our websites

From Protection to Production Project

<http://www.fao.org/economic/PtoP/en/>

The Transfer Project

<http://www.cpc.unc.edu/projects/transfer>

