



Key results and methodological challenges in the Mozambique PSA impact evaluation

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Outline of the Presentation

- Description of PSA – Food Subsidy programme
- Description of the evaluation strategy
- Problems in the implementation of the strategy
- Targeting analysis
- Description of the sample
- Main identifiable impacts

- Cash transfer programme that started in the early 1990's after years of civil war (urban bias)
- Implemented by the National Institute for Social Action (INAS) of the Ministry of Woman and Social Action (MMAS)
- Targeted at those head of households who are old (93%), disabled (6%) or chronically ill (1%) and cannot guarantee their own subsistence.
- Means testing per capita income = value of the benefit. Pensioners and workers.
- Selection process: through "*permanentes*" chosen by community and appointed by INAS.
- Monthly payment: 100 meticaïs (US\$ 3) for the direct beneficiary plus 50 meticaïs for indirect beneficiaries (spouse and double orphan grandchildren) up to a maximum of 4. Max: 300 Meticiais.

- Strategy: to benefit from the expansion and review of the value of the benefits in 2008-9. (the programme is still expanding).
- However, the geographical expansion does not follow a poverty map... and at the time there was no possibility of randomization of the localities or districts.
- Given the list of actual “future beneficiaries” from INAS we had three options to build a comparison group:

Option 1: To use the list of “*candidatos*” – those listed as eligible by the *permanente* but left out due to limit of vacancies.

Option 2: Active search within treated localities with the help of the *permanente*.

Option 3: Active search in neighbouring localities

We ended up with a mix of option 2 and 3, after failure of 1 and partial failure of 2.

- Quasi-experimental setting:
 1. Comparison group: active search (no administrative record and no access to census data);
 2. Sample is representative of the treated population: new beneficiaries (external validity).
 3. Differences-in-differences with Propensity Score Matching: IPW weighting
 4. Challenge: having an enough sample to be able to identify impact on children-related outcomes.

ADMINISTRATIVE ISSUES

- No list of “candidatos” at *delegações* (INAS district offices) in the sample.
- Baseline: 25% of the treated sample are receiving the program
- changes between treated and comparison groups within localities
- Use of administrative data (Lindex) to identify genuine beneficiaries: problems with Lindex – it is not possible to retrieve the whole history. Not clear with all maps were really sent to us (phone call checks)

DATA COLLECTION ISSUES

- Active search within localities interviewed mostly non-eligible households (700 interviews)
- No variable in the baseline dataset to identify direct beneficiaries from original INAS list.
- Another consultancy firm did the field survey in the follow-up
- Attrition rate of 11%
- Dirty data: data entry problems (no double entry) and supervision in the field (internal and external)

	Treated	Comparison	Total
Baseline	1,014	1,647	2,661
Follow-up	935	1,445	2,380
Balanced sample (without contamination and misreporting)	546	1,373	1,919

- Definition:

Intention to treat – original classification according to INAS list

Actually treated – those who declared were treated and were also in INAS Lindex payroll

Dropped from impact evaluation analysis: contaminated in the baseline and those that reported being treated and who were not in Lindex.

Changes between treated and comparison status within localities

Baseline	Follow up		
	Treated	Comparison	Total
Intention to treat	416	148	564
Comparison	130	1,225	1,355
Balanced sample (without contamination and misreporting)	546	1,373	1,919

Methodology: comparing the position of PSA eligible/treated sub-groups within the distribution of a “well-being indicator” for the overall rural population in Mozambique (calculated through principal component analysis using the MICS 2008)

Dimensions used in the Principal Component Analysis:

1. demographic characteristics: sex of the head, age of the head, # of family members, presence of orphans, etc.
2. housing quality: material used in floor, ceiling and walls, crowding.
3. possession of durable goods and assets: radio, television, land, animal husbandry.

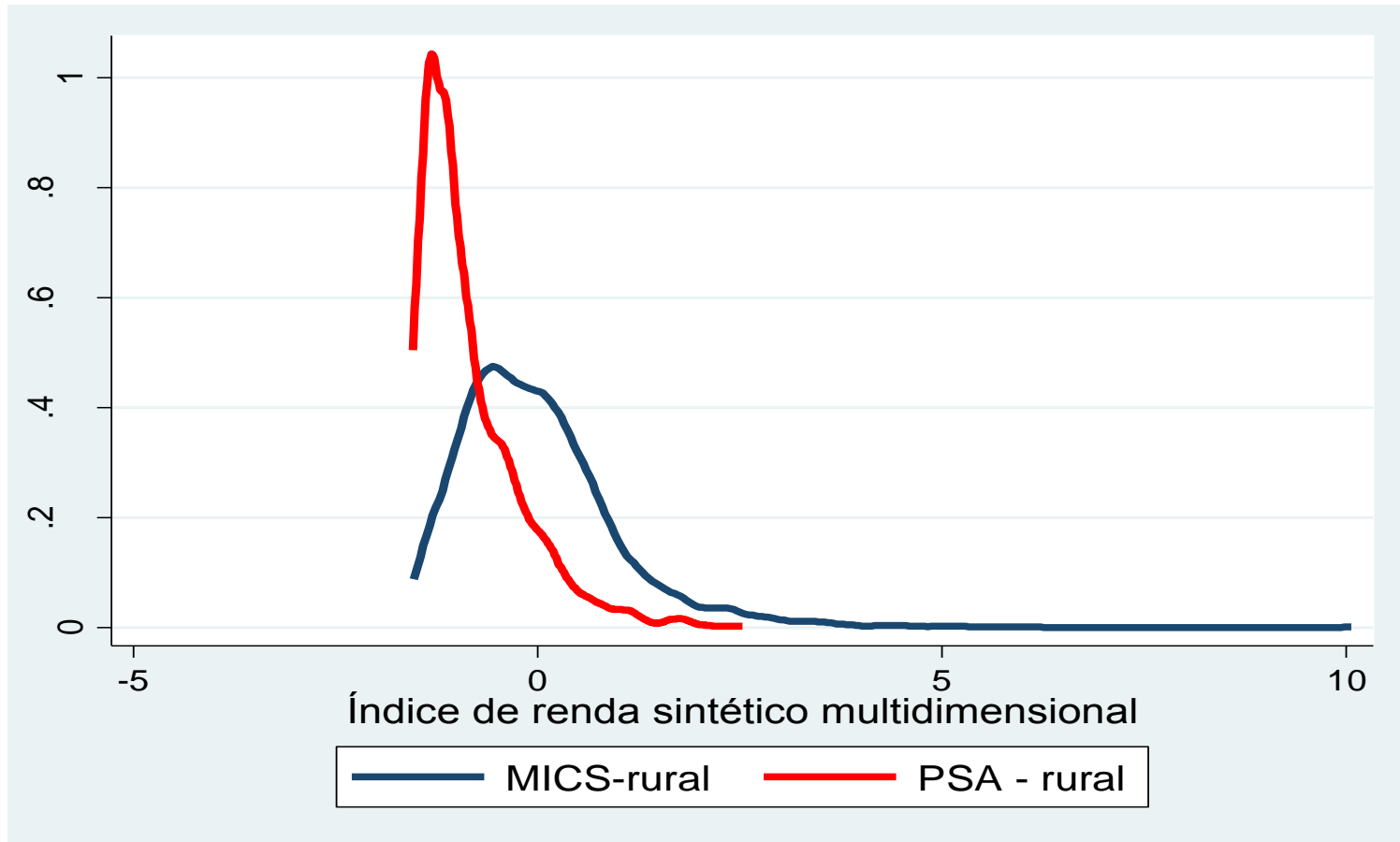
Analysis: Quintile cut-off points

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Analysis: Quintile cut-off points



Rural	MICS rural (1)	MICS eligible (2)	PSA eligible (3)	PSA ITT (4)	PSA treated (5)
Q 1	20	33	66	50	51
Q 2	20	19	15	19	20
Q 3	20	16	10	16	15
Q4	20	13	5	9	8
Q 5	20	19	4	7	6

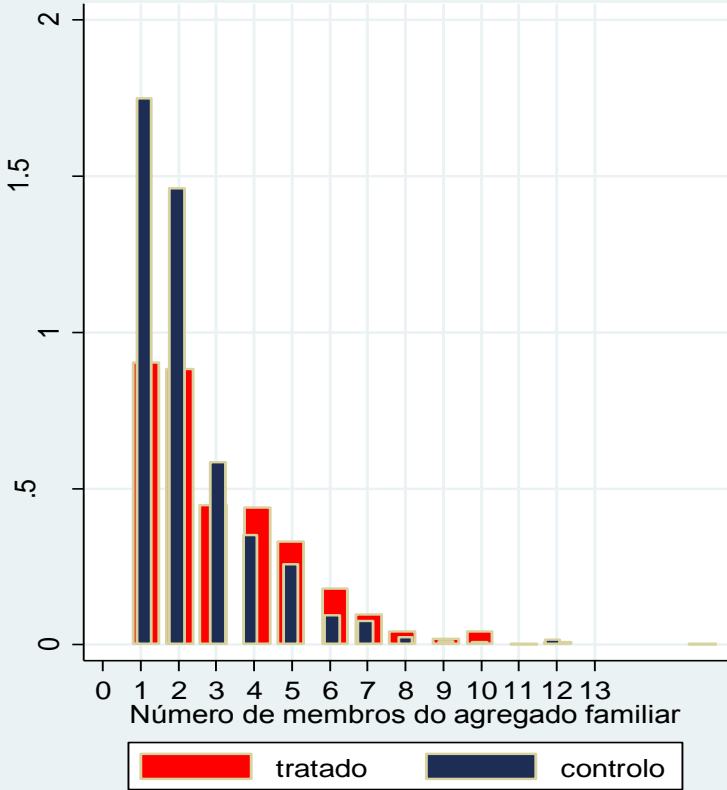
- MICS eligible: women older than 55 and man older than 60.
- PSA eligible: treated + comparison group
- PSA ITT: initial INAS list
- PSA treated: those actually treated

Main points:

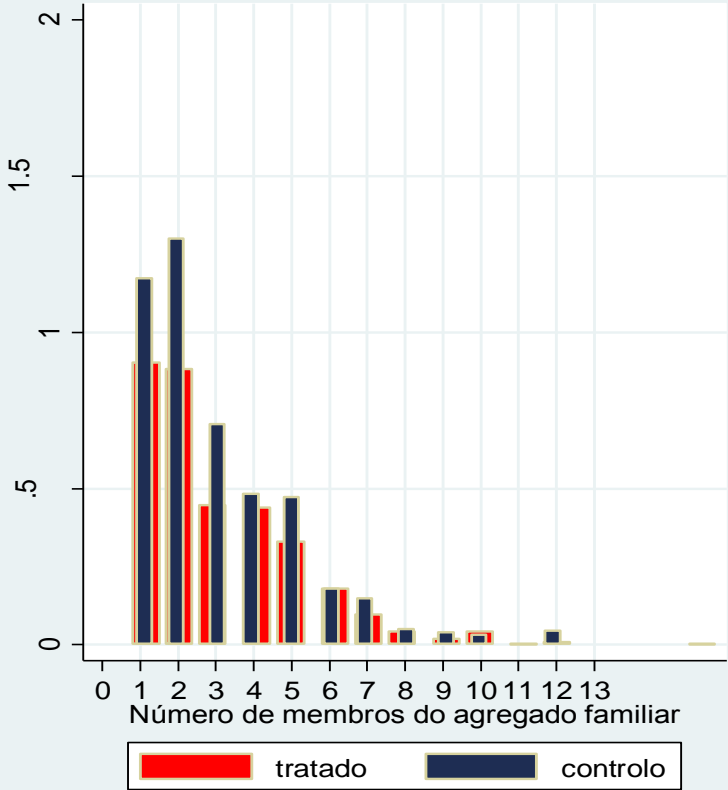
- 1) Elderly headed households are over-represented among the poor;
- 2) However, 'community and enumerator targeted' households in comparison and treated localities are even poorer.
- 3) Surprisingly, ITT and treated samples are not better targeted (or just as well targeted as) than comparison sample.
- 4) Raises the question of how localities are selected... some room for geographical targeting within districts.

- Average size: 3 members
- Working age population (18-55): only 40% of the hh
- Female headed hh: 60% (70% of which are widows)
- Average age of the head of the hh: above 65 years
- Disabled person: 15% of the hh
- Chronic disease: 20% of the hh
- Double orphans: only 6% of the children
- Single orphans: 15% of the children
- Parents migrated: 19% of the hh (40% of hh with children)
- Indirect beneficiaries: only 11% of the hh receive more than 100 Mts
- Machamba: 87% of hh, 24% more than one crop and 7% sell surplus
- Animal husbandry: 35% of hh and 6% sell some surplus
- Other activities: only 6%.

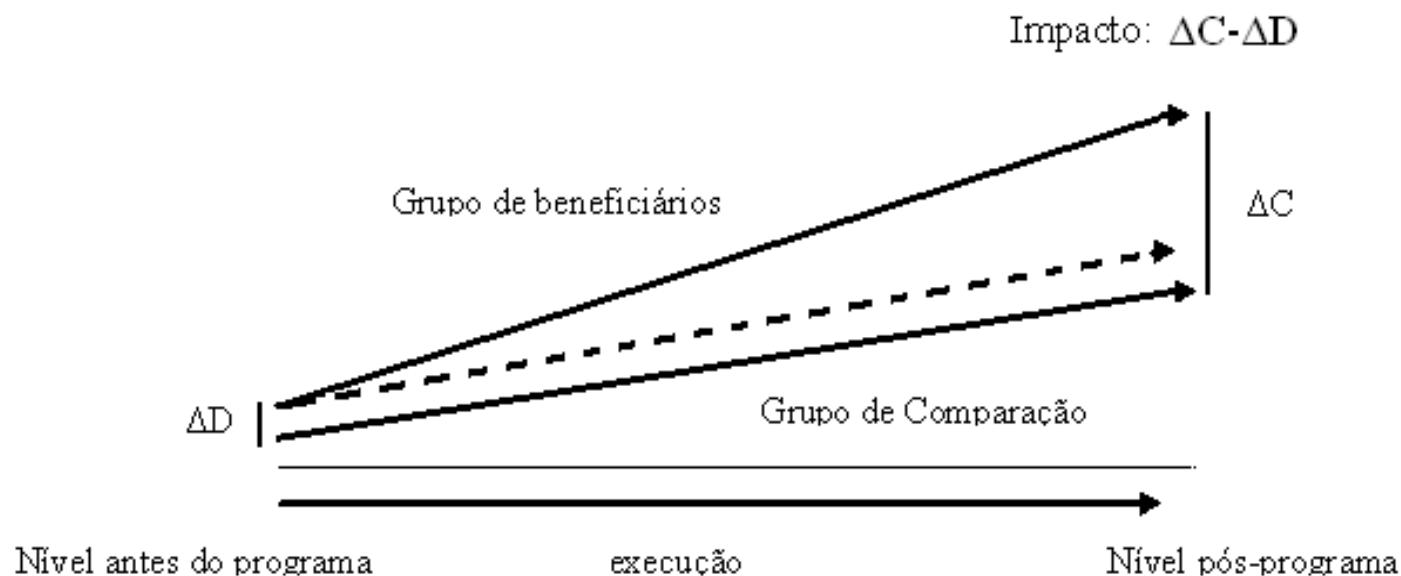
Amostra Não Ponderada



Amostra Ponderada



Suporte Comum: [.1501, .8899]



ΔD = Diferença na linha de base
 ΔC = Diferença no seguimento
 $\Delta C - \Delta D$ = Diferença nas diferenças

Basic Food expenditures share:

Average impact	22%
Female-headed hh	32%
Male-headed hh	7%
Married head of hh	38%
Single or widowed head of hh	13%

Probability of flour consumption

Average impact	15%
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Extra meal odds ratio:

Adult women	4.47
Boys 5-9 years old	3.18

Nutrition

Low weight-for-height (acute malnutrition)	-30%
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Probability of working:

Boys 5-9 years old	-29%
Male adult or elderly	17%
Adult women	24%

Number of working hours in the *machamba*

Female adult or elderly	-7%
Male adult or elderly	-7%

- Achieving to some extent the programme's main objective:
 1. Increase of food expenditure-share and meal frequency ;
 2. One indicator of malnutrition improved for children 0-5;
 3. No impact on adult labour supply (increase for the elderly and woman) and reduction of child labour;
 4. However, no impact on health and education or household composition.

Key policy recommendations:

- Review of double orphanhood as eligibility criterion for indirect benefit;
- Use of geographical targeting within districts
- Improvement of Monitoring and Information System.

THANK YOU

REFERENCES:

<http://www.ipc-undp.org/pub/IPCPolicyResearchBrief17.pdf>

<http://www.ipc-undp.org/pub/IPCPolicyResearchBrief14.pdf>