

Poverty Outreach of Microfinance in Ecuador

*An Application of the CGAP Poverty Assessment Tool on a
Microcredit Program of INSOTEC in Santo Domingo de los
Colorados*

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Features Microfinance Organization

- Private non-profit organization
- 5 Agencies
- +/- 5500 clients
- Technical support and provision of credit
- Requirements
- Commerce, Services ,Manufacture, Agriculture



Santo Domingo de los Colorados :

- Expanding in provision of rural credit

Research objective

Main objective of study:

To examine poverty of client households of the microcredit program of INSOTEC in Santo Domingo de los Colorados, on the basis of the poverty level of non-client households in the wider area, making use of the CGAP tool

- Concept of relative measurement of poverty
- Using different samples of non-client households*

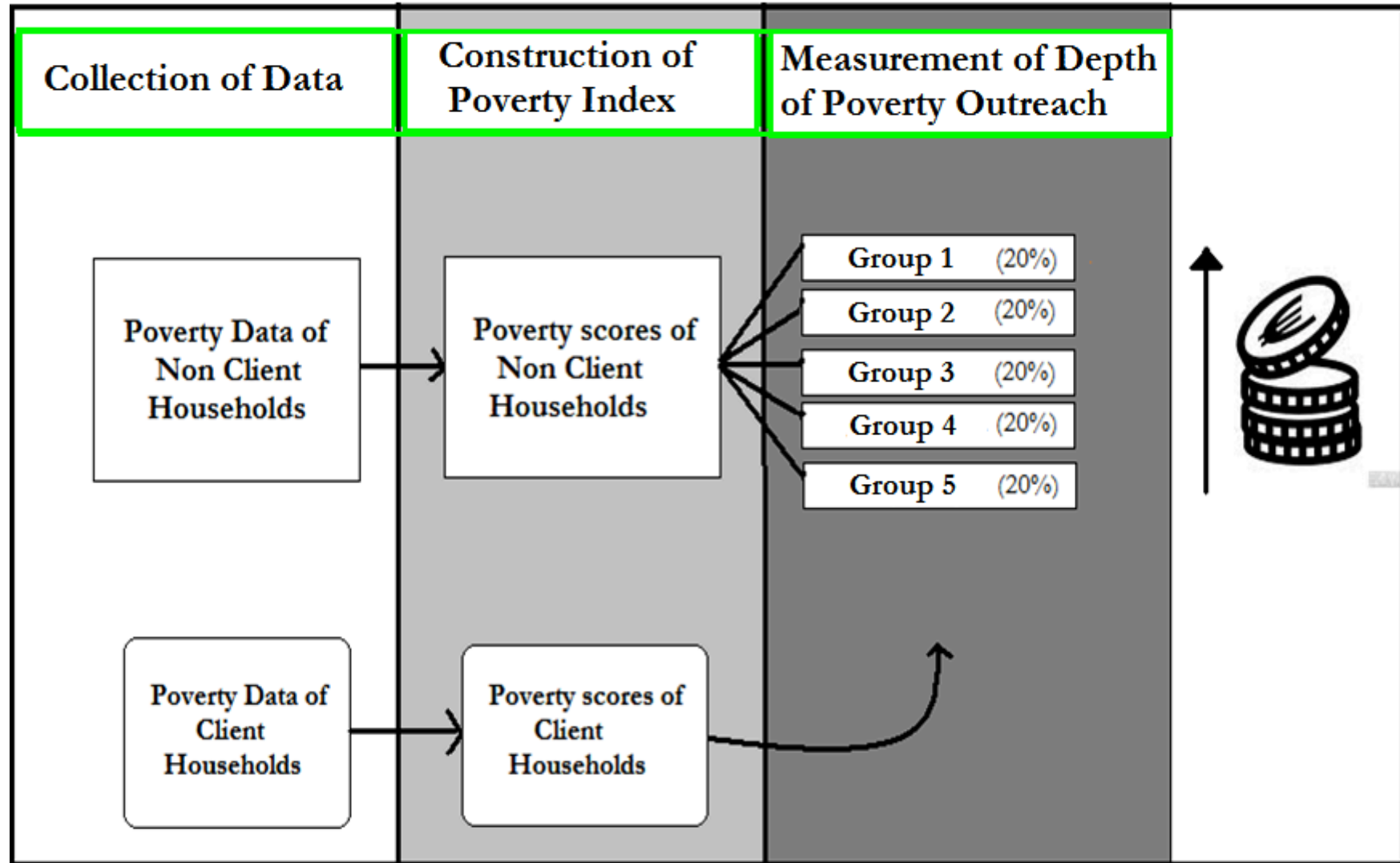
Relevance:

- Interest in classification by poverty level
- Commercialization of microfinance in Latin America
- Explore benefits and disadvantages of the CGAP tool

Approach and Methodology

1. Explanation on the CGAP tool and PCA
2. Sampling client and non-client households
3. Identification of poverty; Defining final set of poverty variables to construct a poverty index

Measurement of Depth of Poverty Outreach



CGAP tool and PCA (I)

Specific features of the CGAP tool

- Benchmark indicator
- Multi-dimensionality
- Non-sensitive information / Easy to collect
- 25 universal poverty indicators
- Additional indicators can be tested

Principle Component Analysis

- A statistical technique that analyses the interdependence of a set of variables and searches for a linear combination of variables that together describe an underlying 'common characteristic', (component) that maximizes the common variance in the data
- Isolates and measures poverty at the household level by means of a set of poverty indicators that together create a poverty index

CGAP tool and PCA (II)

Mathematical representation of first component:

$$A_{1j} = f_{11} \times a_{1j} + f_{12} \times a_{2j} + \dots + f_{1N} \times a_{Nj} \quad (j = 1, \dots, J)$$

f_{1N} : The loadings of the included N variables on the first component

a_{Nj} : The (standardized) values of the N variables for each household j

Selection of poverty variables

- Ordinal variables in PCA
- Set of requirements and tests to adjust the final model

Sampling (I)

Sampling Client households:

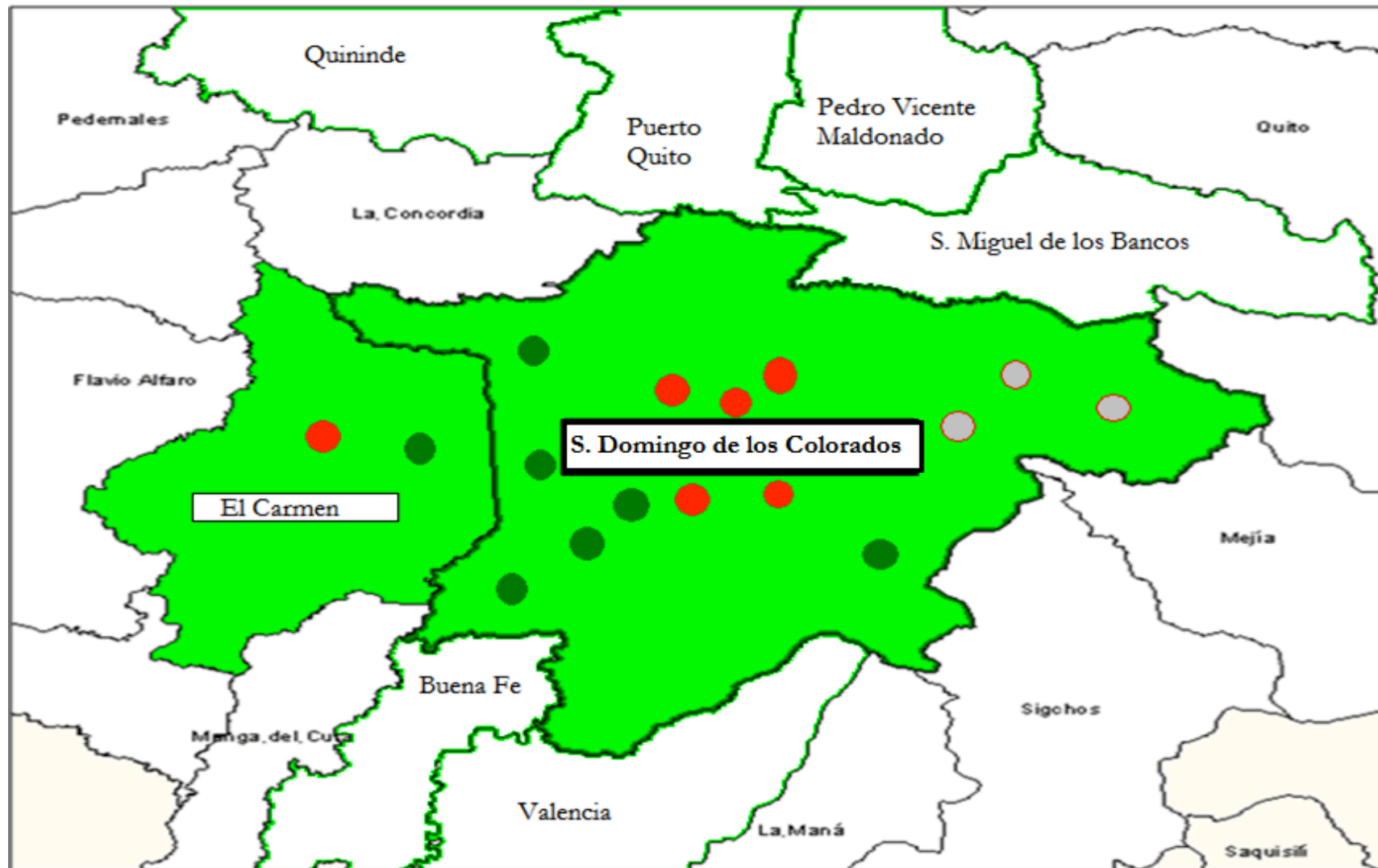
- Institutional interest; Rural client households
- Selecting only new client households

Sampling Non-client households:

- Using a national household database ('ECV 2005/2006')

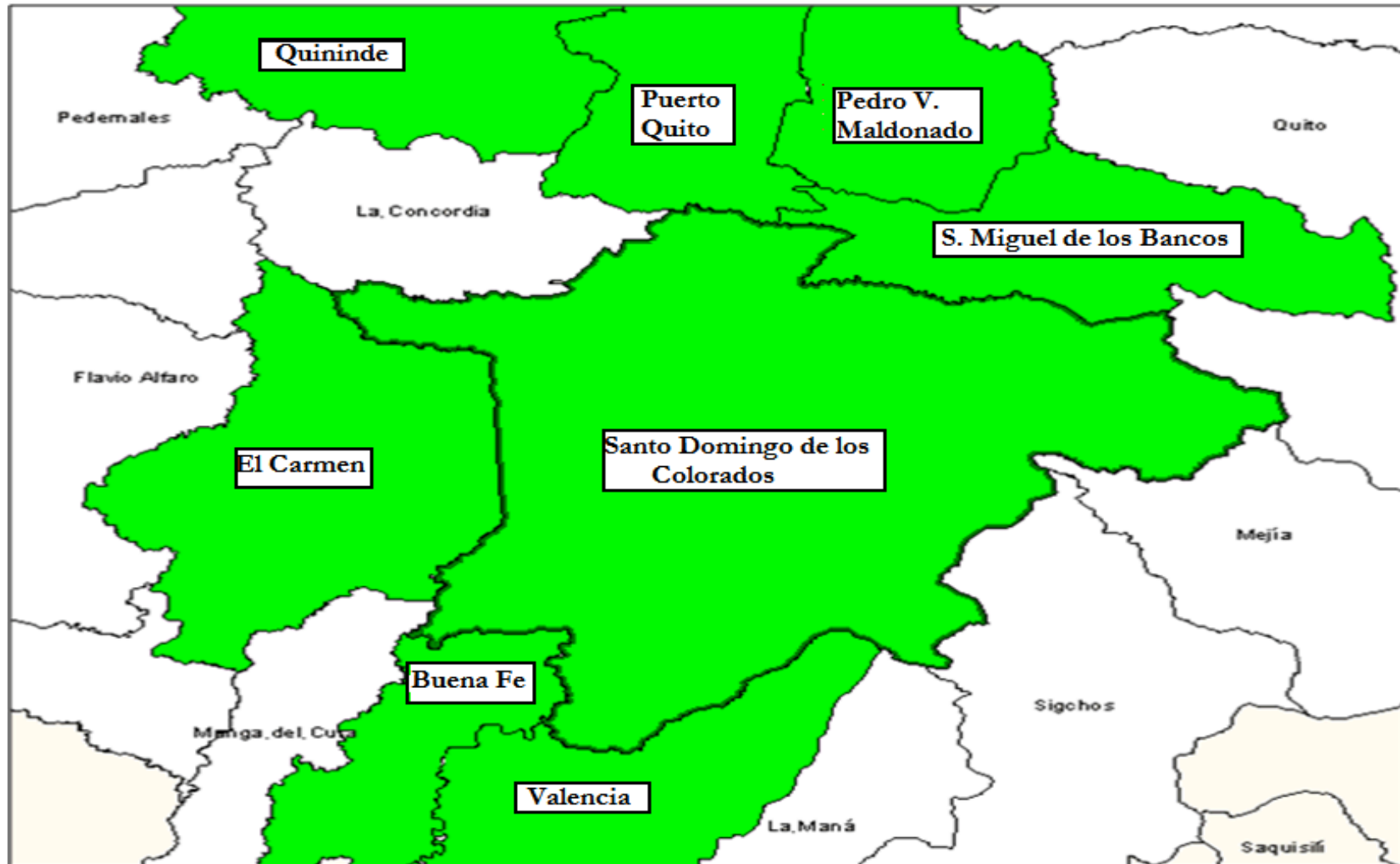
	Local level	National level	Urban level	Rural level
N° of Client Households	165	167	122	45
N° of Non- Client Households	504	13535	7500	6033


Sampling (II)



● = Urban Parish ● = Rural Parish ● = Excluded Urban Parish ■ = Operational Area INSOTEC

Sampling (III)



 = Local area of study

Construction of the Poverty Index (local)

Variables of the Poverty index	Component loading
Per member expenditure on footwear and clothing in last three months*	-0,377
Working dependency ratio	-0,313
Type of roof material*	-0,550
Type of source of water provision*	0,685
Location of source of water provision	0,769
Type of toilet facility *	0,759
Location of toilet facility	0,732
Difficulties in payment of food in last two weeks	0,321
Frequency of purchase of whole chicken	-0,415
Possession of shower	-0,743
Current price value of car* (if available)	-0,395

Tests and Requirements of PCA	
KMO-Test	0,829
Bartlett's Test	Significant
Explained Var. (%)	33,62
Determinant	0,068

Findings (I) Client information

Differences between client and non-client households at the local level:

Regarding the household head

- Younger
- Female-headed
- Higher education
- Own business

Regarding the household

- Higher working dependency ratio
- More rooms per household member
- Higher per member expenditure on food and clothing

Higher shares of client households with

- Flush toilet connected to the sewerage system
- Roof of concrete/paving stone
- Possession of shower

Findings (II) Depth of poverty outreach

Poverty group	% Client Households (Local)	% Client Households (National)	% Client Households (Urban)	% Client Households (Rural)	% Non Client Households
1	61,8	34,1	31,1	53,3	20,0
2	14,5	25,7	12,3	17,8	20,0
3	15,8	22,2	14,8	4,4	20,0
4	3,6	10,8	22,1	13,3	20,0
5	4,2	7,2	19,7	11,1	20,0

- Overall; Low depth of poverty outreach
- However; Considerable Urban depth of poverty outreach
- Significant difference in poverty level between urban and rural client households

Findings (III)

Local Depth of Poverty Outreach reconsidered

Low depth of poverty outreach particularly found at local level

- Real Local depth of poverty outreach
- Extreme low depth of poverty outreach at local level is not fully explained

Possible methodological causes

- Majority of sample is urban-based
- Poverty information client households is more recent
- Self-selection bias / Program placement bias
- Impact of first loan of 'new' clients

Methodological reflections (I)

Relative measurement of poverty

- Practical relevance of knowledge on relative poverty levels?
- Presence of absolute deprivation in Ecuador
- Outcomes of Progress Out of Poverty Index

The benchmark indicator and the condition of multi-dimensionality

- Non-systematic variation in benchmark indicator
- Flaws in multi-dimensional approach
- Multidimensionality vs. Appropriate model
- The more complex the conceptualization of poverty.....
→ e.g.: Short & long term indicators of welfare, Correspondence with PPI

Methodological Reflections (II)

Sustainability of findings

- Description of 'current trend' of poverty at the household level
- Drop outs

Further Research

- Assessment of other agencies; Internal evaluation
- Randomized urban/rural client household samples
- Comparison of different MFI's

Methodological Reflections (III)

Keynotes on the CGAP tool

- (+) Non-sensitive trustworthy data
- (+) Open definition of poverty
- (+) Classification with respect to poverty is useful

- (-) Arbitrariness in the measurement of poverty
- (-) How to relate findings to policy?
- (-) Relation with income poverty remains important in the context of microfinance