Efficacité des mécanismes de ciblage des bénéficiaires des programmes d’assistance sociale dans le secteur informel des communes de Diébougou et Koper

Lassina Konaté
Michel Kone
Omer Combaray
Ouedraogo Jeannette
Prosper Somda
Samandoulgou Rasmata

November 2016
The Community Poverty Monitoring System (PSCS)
"Effectiveness of program beneficiaries targeting mechanisms Social assistance in the informal sector of the communes of Diébougou and Koper"

Final report
November 2016

Members of the CBMS / BF team

Dr. Konaté Lassina
Dr. Somda Prosper
Mr. Koné Michel
Dr Combaray Omer
Ms. Samandoulougou Rasmata
Mr. Kabore / Ouedraogo Jeannette

This work was carried out with thanks to a research grant from the PEP-CBMS Network through its program of analysis of growth and employment policy (PAGE) and to UNICEF / Burkina Faso.

summary

This paper used a probit model to analyze the effectiveness of the targeting mechanisms of beneficiaries of social assistance programs in the informal sector of the municipalities of Diébougou and Koper. The results show that it is not the poorest households in the informal sector that benefit from social assistance programs in the event of a shock. Rather, households whose head is elderly or which are large have a higher probability of benefiting from social safety nets. Similarly, male heads of households or heads of literate households are more likely to benefit from social assistance programs.

Keywords: targeting, beneficiary, social assistance, informal sector
Introduction

Recurring shocks related to climate change, food and financial crises significantly affect people's living conditions in developing countries (World Bank, 2014). Formal safety net programs, particularly cash transfers and in-kind transfers, play a central role in maintaining the minimum level of consumption between normal periods and periods of crisis. While poor people are most vulnerable to shocks, governments and policymakers struggle to identify the most vulnerable populations to benefit from social safety nets.

Social safety nets maintain the standard of living of households and protect them from transient and chronic poverty as well as from food insecurity. They are essential instruments for alleviating chronic poverty and the impact of shocks on poor and vulnerable households. In sub-Saharan Africa, the implementation of social safety nets has lacked coordination and the potential of these programs has been poorly used to address both transient poverty generated by crises and chronic poverty associated with low consumption of households over the long term.

A recent review of the social safety nets of 22 countries in sub-Saharan Africa highlights that existing programs are usually temporary and are often created, managed and funded by international partners and primarily designed in response to shocks or crises (Monchuk, 2013). As a result, these programs do not effectively target the poor. Few social safety nets have also been implemented to help households cope with specific shocks testing the abilities of informal community families or social safety nets.

For this reason, in many sub-Saharan African countries, social safety nets are only a series of disparate programs with uncoordinated targeting criteria. They are also unable to reach the most disadvantaged households. The main challenge, however, has been to put in place an effective targeting system, i.e., to define rules and practices governing the allocation of benefits to the most needy, identified through simple poverty indicators or other indicators of deprivation.

Burkina Faso has experienced the implementation of several social safety nets programs to promote access to basic social services and employment of disadvantaged social strata, and to reduce the effects of exogenous shocks. These programs are based mainly on cash transfers, in-kind transfers, subsidies and exemptions, and Labor Intensive Labor (HIMO).

The review of social safety net programs carried out in Burkina Faso shows that many actions are being implemented for the most vulnerable and the poor. However, most of these actions are not recorded over time due to lack of funding. In addition, these programs do not have
specific mechanisms for targeting beneficiaries of safety nets. This situation favors errors of inclusion and/or exclusion, which inhibits the effectiveness of social safety net programs.

Several key methodological problems hinder the targeting of households in transient and chronic poverty, to wit:

- The need for easy methods in identifying the most affected households who are in poverty, and are food insecure to participate in social assistance programs;
- CESSIT to develop an objective targeting mechanisms in context of program participation, which is often influenced by pressure groups and targeting where tends to be based on membership in some categories of population, such as people who are orphans;
- The difficulty to identify the target population data on poor households remain generally minimal;
- The need for greater social acceptability of decisions in the use of Resources.

The choice of appropriate targeting mechanisms is particularly critical for the informal sector. Most poor people engage in informal activities as their main sources of employment and income. Meine Pieter Van Dijk (1986) identifies three criteria for defining the informal sector: (i) the enterprise has no legal status; (ii) staff do not have a guaranteed minimum wage; and (iii) staff do not benefit from social protection of the national social security fund.

People who work in the informal sector are therefore highly vulnerable to economic and climatic shocks. They are not able to cope with major shocks and often need social assistance to mitigate the effects induced by situations of crises. The effectiveness of targeting mechanisms of beneficiaries of social safety nets in the informal sector is a sine qua non for poverty reduction and food insecurity caused by recurrent shocks.

A fundamental question then arises: do the targeting methods used by social assistance programs in the informal sectors actually benefit the poorest households? To answer this question, this study uses survey data collected from heads of households operating in the informal sector of the municipalities of Koper and Diébougou.

The rest of the paper is composed of five sections. The first is a review of the targeting methods used by the beneficiaries of social programs. The second section describes the model adopted to evaluate the effectiveness of the targeting mechanisms of beneficiaries of social assistance programs. The third presents the source of the data and the descriptive analysis of the main characteristics of the households. Then, the fourth section presents the results on the
effectiveness of targeting mechanisms. And finally, the last section draws conclusions and implications of the study in terms of economic policies.

1. The targeting methods used by beneficiaries of social programs

Five methods are commonly used for targeting recipients of social safety net programs, namely: (i) resource review; (ii) the Multidimensional Livelihood Test; (iii) community targeting; (iv) geographic targeting; and (v) self-targeting.

The verified declaration of resources generates an estimate of the real well-being of households from fairly easily observable characteristics of households and individuals. In the context of the verified declaration of resources, the measurement of the welfare of each potential beneficiary is compared with an eligibility threshold. This method is demanding insofar as the verified declaration of resources is based on information provided by households and it is in their interest to undervalue their income, assets and expenses in order to be deemed eligible. Verified resource reporting is typically used to identify households that are food insecure.

Rather than using the verified resource declaration, countries with high rates of poverty and informal income and expenditure information can generate an estimate of household welfare through statistical models based on observable variables, all closely related to the standard of living of the household. An example is the Multidimensional Livelihood Test. Once the correlation is established, it is possible to identify households likely to fall below the poverty and food security thresholds. It makes it possible to estimate the standard of living of a candidate based on a statistical model. Statistics, however, can sometimes attract mistrust as they are based on deduction rather than on observation. Many also accuse it of being responsible for serious inclusion and exclusion errors because the Multidimensional Livelihood Test may result in misclassification of households.

The main advantage of the approximation though is its ability to achieve good results in terms of individual targeting of households in chronic poverty based on a rather limited amount of information. Moreover, the Multidimensional Livelihood Test does not encourage households to work or manipulate their level of well-being because candidates are unaware of the variables or weights used to determine the level of well-being or of poverty.

Community-based targeting is the task of nominating eligible candidates from a community to a group of members or leaders whose main functions are independent of the social protection program. The advantage of this type of targeting is that it is based on local information that may be more accurate and less costly to harvest than data from other sources. We must nonetheless also weigh the pros and cons of community targeting, which may also politicize eligibility decisions and exacerbate social exclusion.
Community targeting can provide benefits in the case of chronic poverty interventions and short-term interventions. In the context of programs addressing chronic poverty, community-based targeting requires the existence of an effective community structure. When community targeting is properly applied, it can attract broad support to the program, even when it benefits only a small proportion of the population (FAO, 2005). Community targeting can also be useful in short-term interventions, as communities are able to quickly identify affected members (World Bank, 2013).

Geographic targeting, on the other hand, determines the eligibility of individuals according to their place of residence. In other words, people living in the selected areas are considered eligible, unlike those living outside these areas. In addition, geographical targeting is often used as a tool for budgetary allocation of social assistance policies. The most sensitive aspect of this type of targeting is determining the resolution to be adopted in selecting beneficiary areas.

Based on national programs, it is difficult to achieve a geographical breakdown that identifies small areas characterized by high concentrations of poverty. If provinces or districts with high levels of chronic poverty or food insecurity can be identified, differences in the standard of living among households within these large geopolitical constituencies are likely to remain high.

Alderman et al. (2003) suggest that geographic targeting can be fine-tuned by combining census data with expenditure levels. Households in an exposed area will not all be affected by a shock, and even if this is the case, some of them will have sufficient resources to access survival strategies to avoid falling in poverty and food insecurity.

Self-targeted programs are technically open to all, although they are designed such that only households with very high needs can actually participate. In the case of public works, for example, wages are set at such a low level that these programs will only attract workers willing to accept the tariff. This type of targeting has been widely used to alleviate poverty following economic crises and to support reconstruction and job creation following natural disasters. According to the literature, self-targeting is most appropriate in the case of temporary interventions to respond to crises causing large increases in reported unemployment or to maintain income levels during hollow agricultural seasons. Alatas et al. (2013) point out that by associating it with an asset valuation, this method can enhance the effectiveness of targeting.
The literature also indicates that better targeting results can be achieved by combining different methods within the same program rather than using a single method (Grosh et al. 2008; Coady et al., 2012; and Handa et al., 2012).

Modelling of mechanisms of targeting the program beneficiaries of social aid

This section presents the theoretical model and the variables that have been used in the analysis.

1. Setting the precise targeting of beneficiaries

Administrators of social assistance programs base their decisions on targeting beneficiaries of social safety nets on the expected community social well-being. They decide to select a given beneficiary only if the expected social welfare is higher than the initial situation. To this end, the Probit binary choice model is appropriate to identify the factors that influence the targeting decision of the beneficiaries of a social safety net program.

Well-being expected social community (\( \theta \)) by the administrator of social safety net programs is an unobserved latent variable that determines the decision to target a given household to benefit from a social assistance program or not. The well-being observed social community (\( \theta \)) is set to 1, that is, to say that the household is actually selected, if \( \theta > 0 \), i.e., that the household is not selected. The model can be expressed as follows:

\[
\begin{align*}
\text{if decision} & \quad \text{BLER household} \\
\text{if decision} & \quad \text{not to target a household}
\end{align*}
\]

Or

\[
\begin{align*}
\text{is the vector of all the factors influencing susceptibles}\ s\ \text{targeting of beneficiaries of social assistance programs;} \\
\text{Is a vector of unknown parameters to be estimated;} \\
\text{Is a vector of random errors.}
\end{align*}
\]

The implementation of this model requires the definition of relevant variables that determine the targeting mechanisms of beneficiaries of social assistance programs.

2. Definition of the mode variables

Many factors can influence the decision to target beneficiaries of social assistance programs. These factors include poverty, place of residence, indicators of vulnerability to
shocks and indicators of community power. The model analysis variables are based on these criteria.

**Welfare.** Social assistance is a binary variable that takes the value 1 for all households that have received social assistance, 0 otherwise.

**Poverty.** Poverty is represented by binary variables multidimensional poverty quintiles. Quintile higher poverty is considered as a reference. Each poverty quintile takes the value 1 when the household is a member of this group, 0 if not.

**Place of residence.** The residence environment is a binary variable that takes the value 1 when the household resides in urban areas and 0 otherwise.

**Indicators of vulnerability to shocks.** Household vulnerability is measured by the age of the head of household and the dependency ratio.

**Community power indicators.** The ability of the household to influence decision making in the community is measured by gender and level of literacy of the household head. The sex of the head of household is a binary variable which takes the value 1 if the head of household is a man, 0 otherwise. Literacy is also a binary variable that takes the value 1 when the head of household is literate, 0 otherwise.

The expected effects of these variables on the probability of a household receiving social assistance are summarized in Table 1.

**Table 1: Explanatory variables for the Probit model**

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Type of variable</th>
<th>Expected sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social assistance (1 = yes, 0 = no)</td>
<td>Binary</td>
<td></td>
</tr>
</tbody>
</table>

**Independent variables**

| First quintile of poverty | Binary | + |
| Second Poverty Quintile | Binary | + |
| Third quintile of poverty | Binary | + |
| Fourth Poverty Quintile | Binary | + |
| Place of residence (1 = urban, 0 = rural) | Binary | - |
| Dependency ratio | keep on going | + |
| Age of head of household (year) | keep on going | + |
| Sex of head of household (1 = male, 0 = female) | Binary | - |
| Literacy of the head of household (1 = yes, 0 = no) | Binary | + |

**Source:** Construction of the author from the theoretical and empirical literature review
3. **Source of data and characteristics of the model**

This study uses primary data collected from households in all the villages of Diébougou and Koper communes within the framework of the SSCP. The commune of Diébougou is located in the province of Bougouriba and the commune of Koper in the province of Ioba. Like the other regions of Burkina Faso, agriculture and livestock are the main economic activities of households in these communes. The tools used to collect the data were the household questionnaire and the interview guide. The collection consisted of administering the household questionnaire to all households. The community care guide was administered locally to a group using the "focus group" method.

Table 2 presents the socio-economic characteristics of households in the Diébougou and Koper communes for which the head of the household operates in the informal sector. The data indicate that most of the households surveyed live in rural areas (87%). The incidence of multidimensional poverty is around 38 percent of these households. However, only 30 percent of households benefit from social assistance programs to cope with exogenous shocks. Heads of households are generally men (76%) with an average age of 44.5 years. Only 21 percent of heads of households are literate. The dependency ratio is in the range of 0.42, which means that each asset has less than one inactive at its expense.

| Table 2: Characteristics of households where the head works in the informal sector |
|---------------------------------|-----------------|
| Welfare                         | 0.30            |
| Impact of multidimensional poverty | 0, 38           |
| Place of residence (1 = middle urban, rural = 0) | 0.13            |
| Dependency ratio                | 0.42            |
| Gender of household head (1 = male, 0 = female) | 0.76            |
| Age of head of household (year) | 44.50           |
| Alphabetical discretization of household head (1 = yes, 0 = no) | 0.21            |

Source: Calculation based on SSCP survey data, 2011 and 2014

4. **Determinants of mechanisms for targeting beneficiaries of social assistance programs in the informal sector**

The parameters of the Probit model were estimated using the maximum likelihood method. The results of econometric estimation of the model are presented in Table 3. The results indicate that the model is well specified as a whole. There is a correct prediction of 69.4 percent and the variables included in the model significantly influence the probability of an informal sector household receiving social assistance at the one percent level. The test of
individual significance shows that all estimated coefficients have a significant effect on the probability that a household will benefit from a social safety net program in the event of a shock. The results obtained are therefore fairly robust and can be used for interpretation and analysis of economic policy.

**Table 3: Result of the econometric estimates of the model**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Robust standard errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.70 ***</td>
</tr>
<tr>
<td>First quintile of poverty (1 = yes, 0 = no)</td>
<td>-0.36 ***</td>
</tr>
<tr>
<td>Second quintile of poverty (1 = yes, 0 = no)</td>
<td>-0.16 ***</td>
</tr>
<tr>
<td>Third quintile of poverty (1 = yes, 0 = no)</td>
<td>-0.08 **</td>
</tr>
<tr>
<td>Fourth quintile of poverty (1 = yes, 0 = no)</td>
<td>-0.13 ***</td>
</tr>
<tr>
<td>Place of residence (1 = middle urban, rural = 0)</td>
<td>-1.74 ***</td>
</tr>
<tr>
<td>Dependency ratio</td>
<td>0.21 ***</td>
</tr>
<tr>
<td>Gender of household head (1 = male, 0 = female)</td>
<td>0.13 ***</td>
</tr>
<tr>
<td>Age of head of household</td>
<td>0.00 ***</td>
</tr>
<tr>
<td>A literacy of household head (1 = yes, 0 = no)</td>
<td>0.22 ***</td>
</tr>
</tbody>
</table>

Wald chi2 (9) 599.61
Prob> chi2 0.000 ***
Correct prediction (%) 69.4
Number of observations 11549

*** p <0.01, ** p <0.05, * p <0.1

**Source:** Estimation from SSCP survey data, 2011 and 2014

Table 4 presents the marginal effects of different factors on the likelihood of a household head in the informal sector receiving social assistance in the event of a shock. The results indicate on average that the poorest households are unlikely to receive social assistance. Compared to a household in the last multidimensional poverty quintile, the probability that a household of the former in poverty receives social assistance decreases by 0.11.

The same can be said for the poorest households in the second quintile (0.05), the third quintile (0.03) and the fourth quintile (0.04) who are unlikely to have access to assistance programs compared to the lowest quintile, which groups together the richest households. This indicates that targeting mechanisms do not select the poorest households in the informal sector.

However, the results show that compared to a rural resident household, the probability of a household residing in urban areas receiving a safety net program decreases by 0.33. This is the factor that has the greatest effect on the likelihood of receiving social assistance. This result
indicates that the geographical criterion is the most important in the targeting policy of households to benefit from social protection programs in the informal sector of the municipalities of Diébougou and Koper. This criterion for targeting beneficiaries of social safety nets may lead to the inclusion of non-poor households or to the exclusion of poor households insofar as the residential environment does not systematically indicate the state of poverty.

The gender of the head of household is also an important determinant in the access to social assistance programs. Table 4 shows that the probability of a male head of household receiving a social assistance program increases by 0.04 compared to a woman. This can be explained by the fact that men can more easily express and impose themselves at the community level, influencing targeting decisions in their favor. Similarly, literate heads of households are likely to benefit from social safety nets higher by 0.07 compared to the non-literate. Literate heads of household are more able to access information and use it to their gain to be selected and to benefit from social assistance programs.

It also appears that the probability of an informal sector household receiving social assistance increases with the level of dependency and the age of the head of household. When the dependency ratio increases by one unit, the probability that the household receives social safety nets increases by about 0.07. Similarly, an increase in the age of the head of household leads to an increase in his chance to benefit from social safety net of about 0.002. These two criteria, which are often considered as indicators of vulnerability, influence the targeting decisions of households receiving social safety nets. However, these criteria may lead to biased results as the size of the household and the age of the head of household do not automatically imply vulnerability to shocks.

**Table 4: Marginal effects of factors on the probability of receiving social assistance**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Marginal effects</th>
<th>Standard errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>First quintile of poverty</td>
<td>-0.1107 ***</td>
<td>0.0110</td>
</tr>
<tr>
<td>Second Poverty Quintile</td>
<td>-0.0517 ***</td>
<td>0.0123</td>
</tr>
<tr>
<td>Third quintile of poverty</td>
<td>-0.0260 **</td>
<td>0.0127</td>
</tr>
<tr>
<td>Fourth Poverty Quintile</td>
<td>-0.0411 ***</td>
<td>0.0122</td>
</tr>
<tr>
<td>Place of residence (1 = urban, 0 = rural)</td>
<td>-0.3317 ***</td>
<td>0.0058</td>
</tr>
<tr>
<td>Rate outbuilding</td>
<td>0.0685 ***</td>
<td>0.0159</td>
</tr>
<tr>
<td>Sex of head of household (1 = male, 0 = female)</td>
<td>0.0421 ***</td>
<td>0.0098</td>
</tr>
<tr>
<td>Age of head of household</td>
<td>0.0016 ***</td>
<td>0.0003</td>
</tr>
<tr>
<td>Alphabetical discretization of household head (1 = yes, 0 = no)</td>
<td>0.0744 ***</td>
<td>0.0119</td>
</tr>
</tbody>
</table>

Source: Estimation from SSCP survey data, 2011 and 2014
Conclusion and policy implications

This paper used a Probit model to analyze the effectiveness of the targeting mechanisms of beneficiaries of social assistance programs in the informal sector of the municipalities of Diébougou and Koper. The results highlight the inability of adopted social safety net programs to target the poorest households in the informal sector. It is mainly large households where household heads are elderly which have the highest probability of being selected. However, these criteria are not necessarily good criteria of vulnerability and poverty. It is also noted that a household's ability to influence its community, particularly through literacy and the masculinity of its leader, increases its likelihood of being selected for social safety net programs. These factors are not good indicators of poverty.

These results indicate that administrators of social assistance programs for the informal sector should review their mechanisms for targeting beneficiaries. Toward this end, the use of a multidimensional poverty indicator could make it possible to target the most vulnerable and poorest households more effectively.

5. Bibliography


Meine Pieter Van Dijk in "Burkina Faso: the informal sector of Ouagadougou -Edition l'harmattan 1986".