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The *Programa Subsidio de Alimentos* in Mozambique: Baseline Evaluation*

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I. Introduction

The Food Subsidy Programme (*Programa Subsidio de Alimentos*, PSA) is the main basic social protection programme of the government of Mozambique in terms of coverage. It was established in 1990 to help the destitute elderly (women above 55 and men above 60), people living with a disability, the chronically sick and their dependants by providing a monthly cash transfer. The programme falls under the mandate of the Ministry for Women and Social Action (MMAS), while implementation is the responsibility of the National Institute for Social Action (INAS), the Ministry's executing agency.

Photo by UNICEF.

By the end of 2008, the PSA covered 143,455 households with a total of 287,454 beneficiaries. The main direct beneficiaries were the elderly (93 per cent), followed by people living with disabilities (6 per cent) and the chronically ill (1 per cent). The general eligibility criteria are: age, residency for more than six months in the selected area, per capita earnings less than the minimum benefit on the PSA scale, and/or recognised by medical declaration to be chronically ill or living with a disability. Potential beneficiaries are selected by a local intermediary (known as a *Permanente*) chosen by the community and appointed by INAS, after which the application undergoes an approval process within the INAS delegation.

Although the PSA is a national programme, it does not reach the entire eligible population and its coverage is unequally distributed across districts. This is the result of the absence of an expansion strategy based on poverty incidence and population density. Expansion of the PSA was initially restricted to urban areas in order to mitigate the effects of the post-war structural adjustment programme on the urban population (Low et al., 1999). Currently, expansion to remote rural areas is a programme priority. The programme's administrative cost is considered high relative to the amount transferred to the beneficiaries (Ellis, 2007). Though the programme is the largest in terms of the number of beneficiaries, its coverage is low relative to the potential universe of beneficiaries. Expansion of the programme tends to diminish the administrative costs in relative terms.

In 2008, the PSA underwent two important reforms. First, the subsidy scale increased. The subsidy amount for the first (direct) beneficiaries rose from 70 to 100 meticais (US$2.5 to US$3.6), and the additional benefit for dependants increased from 10 to 50 meticais (US$0.36 to US$1.80) per dependant up to four. The second reform was the greater focus on the inclusion of eligible dependants as indirect beneficiaries in the payment scheme, and the monitoring and evaluation system.

Though it is a relatively old programme, it has never been evaluated before. An opportunity to conduct an evaluation has arisen in the context of the reforms. This Policy Research Brief seeks to improve knowledge of the PSA by presenting the first part of the PSA impact evaluation—that is, the summary of the baseline report.

II. Objectives of the Evaluation

The objective of the evaluation is to analyse the impact of the PSA on individual beneficiaries and families, so as to inform the technical and political dialogue with government and partners on the PSA's direction. It is anticipated that the empirical evidence generated by the evaluation will influence key programme decisions such as the amounts and range of the benefit scale, number of beneficiaries, composition of the target group, and so on. The baseline survey to which this Brief refers is the first stage of gathering important empirical evidence to nourish the debate on social protection in Mozambique.

III. Methodology and Data

The evaluation will assess the impact on a sample of *new* beneficiaries who were included in the programme in 2008, according to the INAS expansion plan. For the new beneficiary households, the programme's impact on a particular outcome is the

difference between the observed value of that outcome for new beneficiaries and the value of the same outcome for the same beneficiary households if they had not received the benefit. The latter is called the counterfactual. Since it is impossible to observe the same household as a beneficiary and non-beneficiary of the programme at the same time, it is not enough to have data only on the beneficiaries; we have to use a control group to simulate the counterfactual.

Social experiments based on randomisation (randomised control trials) of the programme among beneficiaries or of the localities in which the programme is going to be implemented guarantee that both the treated (beneficiaries) and control (non-beneficiaries) groups are, on average, identical in both observed and non-observed dimensions. In such a context any difference between the treated and control groups after a certain time of exposition can be attributed to the programme. This is not the actual context of this evaluation. The expansion of the programme was not randomised across districts or localities; thus we have to rely on quasi-experimental techniques to make the control group resemble the treated group in order to build the counterfactual. In particular, we will use the probability of being treated (the propensity score) to reweight the control observations. The applied methodology also entails following the treatment and control groups for a period and comparing outcomes between the two—that is, the differences-in-differences (DD) approach. The weighted difference in indicators between baseline and follow-up is calculated for each group (beneficiary and non-beneficiary); the difference in these two differences is calculated to obtain the estimate of programme impact (Hirano et al., 2003; Abadie, 2005).

The evaluation will use quantitative data from 11 districts in seven provinces. The first phase was the baseline survey in 2008, to which this Brief refers. The second phase, the follow-up, will be carried out in 2009. The same questionnaire will be applied in both surveys to the same households.

For the treatment group, a total of 1,016 households participated in the survey; there were 1,650 households in the control group. The treatment group was selected on the basis of an INAS list of new candidates. The baseline did not include households in villages where the programme was already operating before the baseline, so as to prevent "contamination" of the sample. The control group was supposed to comprise the remaining potential beneficiaries in the same communities (but who would not receive the PSA until 2010). As this group was too small to yield a feasible control group, neighbouring communities were included in the sample and the INAS *Permanente* selected the control group on the basis of the INAS eligibility criteria.

It is important to note that the external validity of this evaluation is limited, since our treated sample comes from districts that have been selected to be part of the survey rather than the programme. Similarly, the control group is not representative of the eligible population in the villages where the programme has not yet started, nor of all eligible beneficiaries in Mozambique.

Although the PSA seeks mainly to attenuate the livelihood or subsistence difficulties of people who are permanently unable to work, the evaluation includes some indicators of the impact on livelihood, livestock and farming activities.

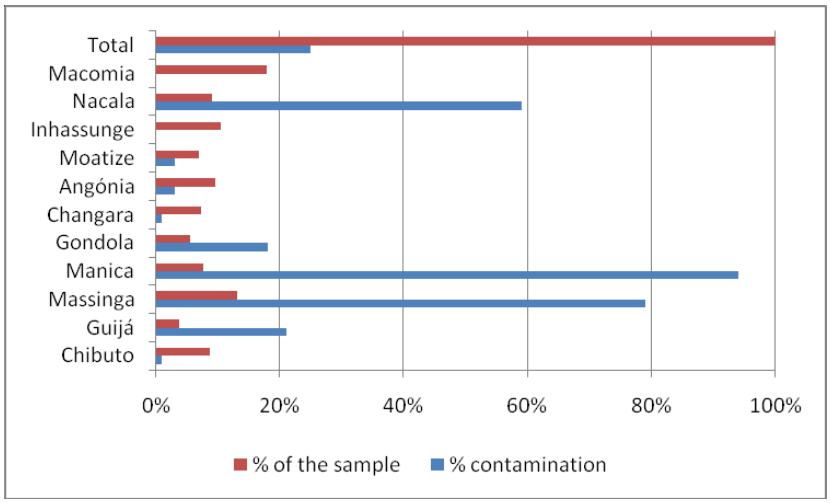
The impact evaluation covers a range of indicators related to consumption, health, education, employment, housing, and intra-household demographic changes. Indicators were developed on the basis of international evidence of the impact of cash transfers, in combination with the need for evidence to feed the local political and policy discussion. Nonetheless, estimates of the impact of the programme will be available only after analysis of the follow-up survey.

IV. Limitations

One of the limitations of applying the questionnaire to the treatment group is that their PSA application had already been approved before the survey. Although they should not yet have received the benefit at the time of the survey, they were aware that they would receive it soon afterwards. Hence there is a possibility that anticipation of its arrival may have led to an initial change of behaviour at the household level.

Additionally, the results of the baseline survey revealed that about 25 per cent of the treatment group sample (257 households from a total of 1,016) were already receiving the benefit (Figure 1). Nevertheless, 64 per cent of these beneficiaries had been receiving the benefit for only a month or less, and 97 per cent for less than three months, which lessens concerns about a possible bias. The households that had already received the benefit are concentrated in the districts of Manica (south), Massinga (centre) and Nacala (north). In Manica, the contamination level reached 94 per cent of the sample (Figure 1).

Figure 1
Contamination and Distribution of the Sample, by Districts



Source: Baseline Survey, 2008.

V. Characteristics of the Treatment Group

The households in the treatment group have an average of three members in each family. Table 1 shows that about 60 per cent of the heads of household are women, and 68 per cent of these are widows.

Among the male heads of household, only 15 per cent are widowers. The average age of the head of household is 66, the women being slightly younger than the men, a fact that is in line with the programme's eligibility criterion.

About 50 per cent of the households do not have children under 18 years of age. Children account for about 37 per cent of the dependants living in the selected households and 8 per cent of the households have more than three children. This picture indicates that, in terms of the sample of the treatment group, there are not many children that potentially could receive an entitlement as indirect beneficiaries. This is aggravated by the fact that, according to the PSA eligibility criteria, children who are not orphans are not entitled to a benefit. Of the households with children, only 21 per cent of those children are potentially eligible on the basis of their orphanhood.

Of those under the age of 18, some 63 per cent are grandchildren of the head of household and 30 per cent are children of the head. About 21 per cent of the children are orphans, and 28 per cent of this group have lost both their father and mother. Among the grandchildren, 24 per cent are orphans and 39 per cent of them have lost both parents. Some 65 per cent of children have a father and a mother but at least one of the parents does not live in the same house. Particularly, for the grandchildren, this number is even higher than 90 per cent.

VI. Major Differences between the Treatment and Control Groups

The comparison between the treatment and control groups reveals existing differences *before* the roll-out of the programme (Table 1). These should be considered in the impact evaluation, at the time of the analysis of the follow-up survey.

Overall, in the control group, the size of the household is smaller: an average of 2.3 members, against 3.1 in the treatment group. Of the treatment group, 51 per cent do not have children in the household, while in the control group 67 per cent of the households do not have children. Additionally, 8 per cent of the treatment group have more than three children while only 3 per cent of the control group have more than three children in the household. Data on orphanhood do not differ significantly between the treatment and control groups.

VII. Preliminary Findings on the PSA Benefit

Since a number of households in the treatment group had already received one monthly cash transfer, it is possible to analyse certain aspects of the implementation of the programme on the basis of the baseline data. The average amount of the benefit received by the households is 149 meticais (US$5.38). About 50 per cent of the households received the minimum amount of 100 meticais and 30 per cent received 200 meticais. Among those that received the minimum, 35 per cent had at least one child younger than 18 years; that child represents a potential indirect beneficiary who was not receiving their entitlement. This indicates that for a third of the beneficiaries, some children were not counted in the calculation of the total amount of the benefit, perhaps because the child has not lost his or her parents, an eligibility criterion. Table 2 compares the amount effectively received by the household with the actual entitlement, according to the composition of such a household.

Table 1
Demographic Characteristics of the Treatment and Control Groups

	Treated	Control	Total
Size of household (mean number of people)	3.07	2.29	2.68
Dependency rate	1.01	0.86	0.94
Percentage of households without members aged 15–64	28.6	34.6	31.6
Characteristics of head of household			
Percentage of men	39.3	40.8	40.1
Age	65.6	68.7	67.2
Age, women	65.1	68.0	66.6
Age, men	66.4	69.6	68.1
Number of children (%)			
Have children 0–17	49.1	32.8	40.9
Have children 0–4	15.4	11.0	13.2
Have children 5–14	41.1	24.9	32.9
Have children 15–17	15.6	7.8	11.6
Have more than 3 children 0–17	8.0	3.0	5.5
Children 0–17 relationship with the head of household (%)			
Son/daughter	29.8	32.8	30.9
Grandson/granddaughter	62.6	63.0	62.7
Other	7.6	4.2	6.4
Orphanhood (under 18 years) (%)			
Father and mother died	5.9	5.5	5.7
Only father died	9.9	8.4	9.4
Only mother died	5.1	3.9	4.7
Neither died, but live elsewhere	51.9	55.0	53.0

Source: Baseline Survey, 2008.

Among households that reported having received 100 meticais, 42.5 per cent received the amount that they were supposed to receive when they were classified as beneficiaries, while 57.5 per cent received less than the entitlement. The households that reported receiving 70 meticais, an amount below the minimum, should all receive the maximum amount (300 meticais). Among the households that reported receiving 400 meticais, 73.7 per cent should have received less than the maximum.

Table 2
Actual Entitlement of the Household and Benefit Effectively Received

Benefit effectively received (meticais)	Actual entitlement (meticais)					Total
	100	150	200	250	300	
70*	0.0	0.0	0.0	0.0	100.0	100.0%
100	**42.5**	30.8	11.6	8.1	7.0	100.0%
150	13.6	**53.1**	6.6	13.3	13.4	100.0%
200	41.4	20.5	**10.3**	13.2	14.6	100.0%
250	0.0	0.0	0.0	0.0	0.0	100.0%
300	22.9	33.1	11.5	10.8	**21.7**	100.0%
400*	0.0	23.2	0.0	50.5	26.3	100.0%
Total	38.2	28.9	10.5	11.0	11.4	100.0%

Source: Baseline Survey, 2008.

*Amounts reported by the respondent, but which do not correspond to the amounts actually paid by the programme.

The current average amount of the benefit accounts for 21.8 per cent of a household's current consumption. On the basis of international experience of cash transfers, this may be considered a reasonable proportion of monthly expenditure. However, on the basis of the minimum monthly food basket as set by the Mozambican government, these households fall significantly short of their actual needs for a healthy and dignified lifestyle. A large majority of the respondents also indicated that the amount received is not enough to help with household expenses.

VIII. Final Remarks

It is interesting to note that the simulations of the expansion of the PSA reported by UNICEF (2007), on the basis of data from the Household Survey (IAF) 2002–2003, estimate that those below 18 years of age would account for about 50 per cent of potential indirect beneficiaries, while in the sample of the treatment group only 37 per cent of minor dependants actually receive an entitlement. The reasons for this divergence warrant further research, but it may be related to the application process for the PSA and the fact that a number of the children are not orphans or do not have the appropriate identity documents.

Data on the amount received and the actual entitlement suggest that a significant percentage of potential indirect beneficiaries are not receiving their entitlement. Apart from the fact that a number of families really might not be receiving the correct amount, discrepancies could also stem from the fact that the new beneficiaries of the treatment group are still unfamiliar with their monthly entitlement or report a higher number of dependants, with the hope that this can bring higher benefits. Further analysis of the application process and classification of the families is needed to clarify this picture.

IX. Next Steps

As regards the baseline survey, the next steps are to conduct additional analysis drawing on data from the Household Budget Survey (IOF) and the Multiple Indicator Cluster Survey (MICS) to investigate the targeting of the programme. These surveys will be used to calculate an asset index that will serve as a proxy for household well-being. This will make it possible to assess whether the beneficiary (treated) households are located in the lower echelon of households when it comes to the distribution of assets. As regards the evaluation, the next step will be a second round of data collection by means of a follow-up survey to be conducted in November 2009, through which it will be possible to determine the short-term (one-year) impact of the PSA.

Other research questions, which the evaluation will not answer, need to be explored. Though it is beyond the scope of this impact evaluation, it would be useful to conduct a census among the beneficiaries in order to establish the extent to which they are paid above or below their entitlement, and subsequently to take steps to rectify matters. Finally, the current baseline survey is a quantitative survey that in due time will be complemented by a qualitative study exploring the (cultural) reasons for certain quantitative results.

Independent of the results of the follow-up survey, a number of issues has already been identified as possible subjects of interest for the qualitative study. These issues include intra-household relationships, dependency and social cohesion, self-esteem/dignity, stigma, migration and child labour, the supply side of public services, and linkages between the PSA and other government programmes. ■

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References:

Abadie, Alberto (2005). 'Semiparametric Difference-in-Difference Estimators', ***Review of Economic Studies*** **72 (1), 1–19.**

Ellis, Frank (2007). 'Food Subsidy Programme, Mozambique'. ***Social Transfer Case Studies*** **7. Mimeographed document.**

Hirano, Keisuke, Guido. W. Imbens and Geert Ridder (2003). 'Efficient Estimation of Average Treatment Effects Using the Estimated Propensity Score', ***Econometrica*** **71 (4), 1161–1189.**

Low, J. W., James L. Garrett and Vitória Ginja (1999). 'Can Cash Transfer Programs Work in Resource-Poor Countries? The Experience of Mozambique', ***FCND Discussion Paper*** **14. Washington, International Food Policy Research Institute.**

UNICEF (2007). ***Social Protection: Scaling Up Cash Transfers in Mozambique. Simulated Costs and Benefits of Alternative Scenarios*****. New York, UNICEF.**

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