

An Evaluation Methodology for Minimum Income Programmes in Brazil

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Abstract

This article evaluates, based on the experience in the Paranoá area, the minimum income programme implemented by the Federal District Government in May 1995. The evaluation concerns three aspects. First, an analysis of the means test applied, that is, the system of scores used for the selection of the families among those who have registered as candidates. Second, an examination of the results of the selection process, through the comparison of characteristics of selected and not selected families. Data from the programme files show that the selection process was successful and that the use of scores prevented bias that would have certainly been derived from the use of income as the only selection variable. Third, the comparison of the pool of selected poor families and those defined according to the same characteristics in the National Sample Survey of Households (PNAD) for the Federal District. The fair correspondence of characteristics of the two populations evidences the programme's excellent targeting.

1. Introduction

Income supplementation programmes have been proposed to alleviate poverty in Brazil for three basic reasons. First, they require a relatively modest amount of resources as compared to other programmes with the same target population. According to estimates, in order to fill the income gap - i.e., to bring *per capita* family income up to the poverty line for all the 30.4 million poor Brazilians in 1995 - would have required only 1.2 per cent of the country's GDP (Rocha, 1997) or the equivalent of 2.2 per cent of the total income of non-poor Brazilians. The second reason is the limited efficacy of government programmes for free food distribution (milk, food-baskets, workers' food programmes, etc.), designed to meet nutritional needs based on the premise that food is the most essential item in private consumption. Such programmes cost far more than the value of the goods they transfer and/or they are poorly targeted. The third reason is the notion that for a given cost (i.e., the amount of the income supplement) the beneficiaries' welfare is maximized when they themselves decide how to use such additional income.

In Brazil's Federal District (seat of the national capital Brasilia), there are additional arguments in favour of a minimum income programme. The Federal District has proportionally fewer poor than Brazil as a whole (16.7 per cent and 20.6 per cent respectively in 1995). The intensity of poverty measured by the income gap is close to the Brazilian mean (42 per cent and 43 per cent, respectively), and among the Federal Units of Brazil (the States plus the Federal District), the Federal District had the country's highest mean income in 1995. As a result of these combined factors, to establish a direct transfer scheme aimed at eliminating poverty (measured as income insufficiency and including all individuals below the poverty line, regardless of other, non-income, criteria) would have required the equivalent of 1.2 per cent of the income of non-poor Federal District inhabitants in 1995. By way of comparison, to guarantee income supplementation for the poor in the rural area of the Brazilian Northeast would require 6.2 per cent of the income of the non-poor, showing the important regional differences in terms of poverty incidence and the degree of difficulty in mobilizing resources to deal with it. In addition, the size of the potential target population in the Federal District (an estimated 278 thousand poor inhabitants in September 1995)¹ and the fact that it is essentially urban, make it operationally feasible to implement a minimum income programme there.

Established by the government of the Federal District in January 1995, the School Scholarship Programme is a minimum income programme focused on schooling for children of selected families in the target population.

To qualify for the school grant, set at one minimum wage per selected family, the family must: (i) enrol in public school all its children aged 7 to 14 years; (ii) have resided in the Federal District for five consecutive years; (iii) have a *per capita* family income of up to one-half the minimum wage;² and (iv) prove registration in the Employment and Income Programmes of the Federal District Labour Department whenever there are unemployed or self-employed family members. This last item was never effectively implemented.

The stipend is granted for a period of twelve months, renewable for an equal period. The importance ascribed to children's education is attested by the fact that the stipend is

¹ Refers to the number of individuals who, based on income data from the National Sample Survey of Households (PNAD), had a *per capita* family income of less than R\$62.92 (62.92 reais) in September 1995 (Rocha, 1997). (R\$: Brazilian real)

² In practice this cut-off was increased to 0.7 times the minimum wage (i.e., R\$70.00, based on the minimum wage of R\$100.00 prevailing in May 1995).

suspended whenever they have more than two unexcused absences from school per month. The fact that families apply for the stipend in the same stipend in the schools children attend and centralization of the Programme's activities in the Department of Education corroborate the educational focus of the Programme.

The School Scholarship Programme began in the Paranoá neighbourhood in May 1995 and grew steadily. In March 1996 it had already benefited 14,786 families with a total of 28,672 school children aged 7 to 14. Despite the magnitude of the Programme at the time, the total cost of the stipend was kept below one per cent of the Federal District's budget during its year in operation. The programme grew steadily and in 1999, it assisted 25,000 families. This result, however, was below the original target of 35,000 families in 1999.

In addition, Act # 890 of July 24, 1995, created the School Savings Programme, which guaranteed participating students an annual deposit of one minimum wage in a savings account, which could be drawn on at given intervals, with the balance available to them when they finished secondary school.³

Based on the belief that poverty is not limited to insufficient income and that the efficacy of such a tool depends not only on guaranteeing a minimum income in the present, but on breaking the vicious circle of poverty, the School Scholarship Programme was conceived as a "big push" to promote the social development of low-income families with children. The Programme's targeting based on family income and the presence of children aged 7 to 14 is justified for two reasons.

First, education is known to be the variable with the greatest impact on individual income. Hence, mandatory school enrolment and attendance as conditions for obtaining the school grant, plus the additional incentive provided by the savings grant, are aimed at increasing the demand on the part of the poor for education. On the supply side, measures to upgrade teaching by improving teachers' and schools' psycho-pedagogical characteristics focus on promoting the rehabilitation of basic public schooling as a mechanism for social mobility and the reduction of absolute poverty and inequality.

In addition, focusing on families with children aged 7 to 14 serves as a criterion for limiting the target population. Considering the total low-income population of the Federal District, the school-age criterion reduces the number of poor families by 47 per cent, or by 37.8 thousand, thus greatly decreasing the budget funds needed to cover the Programme. It also promotes an important homogenisation of the target public, thereby facilitating both evaluation of the Programme and co-ordination by government agencies in monitoring, orienting and supporting families.

The additional criterion of having resided in the Federal District for at least five years aims to discourage families from migrating in the attempt to benefit from the Programme, but this criterion provides no advantage in terms of homogenizing the target population and has a much smaller impact than the school-age requirement in limiting the number of beneficiaries.⁴

Having defined a programme's objectives and the forms of action to be adopted by the different agents involved in the process, it was essential to establish procedures to evaluate the results in terms of adequate targeting and social promotion of families. The next section presents an outline for a method of evaluating minimum income programmes. The methodology is then partially tested for the Federal District in the remaining sections

³ The School Savings Programme is beyond the scope of this article.

⁴ The role played by the three selection criteria is discussed in Section 5.

of the paper: Section 3 evaluates the screening and score system used to select participating families. Section 4 characterizes selected and non-selected families in Paranoá, highlighting their similarities and differences. Section 5 compares families selected for the Programme and the overall universe of poor families in the Federal District based on data from the National Sample Survey of Households (PNAD), seeking to verify both the Programme's scope and its actual capacity to reach the intended target population. Section 6 discusses certain aspects of the evaluation method which merit further development in the future. The study concludes with a series of comments and suggestions.

The Paranoá neighbourhood was chosen to illustrate how to apply the evaluation methodology to families participating in the Programme in the Federal District because, in addition to representing 12.3 per cent of the families and 11.9 per cent of the students, it was the first area to be incorporated into the Programme.

The data analysed below reflect the situation prevailing in April-May 1996, after a year of Programme operations in Paranoá, when new families were registered and existing beneficiary families from the first year were re-registered and re-evaluated as to their continuation in the Programme. We provide information for both selected and non-selected families, allowing for an analysis of each group separately and by comparison. Whereas 1,815 families were selected in the first year, the 1996 selection process increased this total to 2,627 families, an increase of 44.7 per cent. Of the families participating in 1995, 1,712 families re-applied and 1,542 were selected. The Programme's carry-over rate was thus 85.0 per cent.

2. Methodology for evaluating minimum income programmes

A methodology for evaluating minimum income programmes can be conceived in three distinct modules. Taking the programme's objectives and the target population's general characteristics as the point of departure, the first module is an analysis of the selection process. The aim is to verify how the basic criteria (in the case of Brasilia, *per capita* family income, the presence of 7 to 14 year old children in the family, and a minimum of five years' residence in the Federal District) have succeeded in reaching poor families and mobilizing them to participate in the Programme. The number of applicant families and analysis of their characteristics show to what extent information about the Programme has reached the target population. Given the set of applicant families, the next stage is to evaluate the selection process: were the criteria and filters that were applied to information given at registration time used adequately in the selection of families? In the Federal District, the basic challenge was to analyse the scoring system (based on personal data and housing and living conditions) as used by the Programme. Analysis of the characteristics of selected versus non-selected families allows one to evaluate the efficacy of the selection process, providing some immediate indication of how successful the targeting has been.

The second module consists of evaluating the targeting by comparing the characteristics of selected families with those of the corresponding overall population as defined by statistical information exogenous to the programme. In Brazil, the best source for this purpose is the National Sample Survey of Households (PNAD), conducted annually by the Brazilian Institute of Geography and Statistics (IBGE), the national statistics agency. However, due to its sample design, the PNAD is not always statistically representative of the area in which a programme operates. The alternative is thus to use the National Census as the source of socio-economic reference information. The disadvantage is that, since the census takes place every ten years, there may be an undesirable time lag between the census data and the programme's reference period. In some cases, available

socio-economic data from State or municipal research institutes may be used when PNAD is not statistically representative and the use of the census implies a large time lag.

In the Federal District, data from the PNAD were used to evaluate the Programme's targeting by comparing the characteristics of the beneficiary population with exogenous information from the IBGE data on the population (defined according to the same criteria). Specifically, analysing the Programme's performance in Paranoá, registration data were compared with those of families meeting the same three basic selection criteria according to PNAD, that is income, presence of 7-to-14-year-old children and at least five years' residence in the Federal District. This comparison in Section 5 below shows that the Programme was properly targeted, i.e. the two populations have similar income profiles, whilst the socio-economic data indicate more adverse living conditions among the beneficiary families, both an expected and desired effect of the selection process.

The third module in the evaluation process measures and analyses the programme's effects on the beneficiary population, a process necessarily centred on verifying the degree of success in achieving the programme's objectives. It is essentially based on data from the application process - at which point the target population enters the programme and subsequent information gathered later on in the process, hence the need to define specific time frames. The short-term evaluation is essentially limited to changes in consumption as a result of the increased income, as well as to changes resulting from the programme's institutional aspects. For example, if it is mandatory to report to the public health clinic or to register at the government employment agency in order to receive the stipend, most families probably will do so, thus altering their previous pattern of behaviour. In the medium term evaluation, one can expect to observe the effects of a higher income marked by improved nutrition, better school performance, a feeling of enhanced citizenship, and greater community involvement. Improved employment and self-sufficiency in income, representing a break in the poverty cycle, are objectives that can only realistically be used as a measure of success in the long-term evaluation.

A fourth module would involve evaluating factors such as costs, sources of financing, responses to increased demand for public services resulting from the programme, and the implementation and articulation among government agencies responsible for the programme's results. This part of the methodology has different characteristics from those discussed here, which are limited to the implementation of the programme *per se*.

After the period of a year and a half since implementation of the Programme in Paranoá, evaluation of its impact on families (and especially on school children) necessarily focuses on changes that are feasible in the short term. Changes should occur in families' spending structure as a function of their increased income, with improved living conditions and nutrition. Short-term changes in adult participation in the work market are not very likely, and those, which may have occurred, can hardly be ascribed to the Programme in this initial phase. Nevertheless, there will probably have been significant changes in the children's school attendance and nutritional status, an indispensable condition for achieving the Programme's long-term objectives.

At any rate, evaluation criteria should be based on a programme's overall and specific objectives. The Programme in Brasilia targets low-income families with children aged 7 to 14. Its official mission statement is that "it is not an aid programme, but an educational one" (Distrito Federal, 1995, p. 17), but in fact, it is an integrated aid programme for low-income families, which requires joint involvement by different government agencies operating in the social area. For this reason, there are two clear perspectives from which the Programme's results can be judged: its impact on the children and on the families.

2.1 Impact on children

From the educational perspective, the goal is not merely that children attending school will stay off the streets, but that school attendance will help them acquire the knowledge needed to escape the poverty trap. Parameters such as teacher's evaluation of the learning progress and non-repetition of school year rates are admittedly insufficient to assess this objective, whether in relation to a programme's participants or to children attending public schools in general. There is now a consensus that standardized learning tests are needed at the end of each school year as an invaluable (albeit difficult-to-implement) tool for the programme's evaluation. The challenge is to assess the unequivocal results of the programme's non-aid facet and the efficacy of initiatives announced within the programme's scope to improve the standard of learning (training and better pay for teachers, the school's administrative autonomy, etc.). In Brasilia, current teacher-student evaluation can be greatly improved, but it is not a basic tool for the Programme's educational evaluation (Distrito Federal, 1996).

In addition to its educational objective, the Programme explicitly proposes to combat the incidence of child labour, which, as shown by both PNAD data and the applicants themselves, is not a major issue in Brasilia. However, in principle and in general, there is no reason to believe that a minimum income programme (even entailing mandatory school attendance on a part-day classroom schedule) could by itself reduce the incidence of child labour, although it should necessarily reduce the hours worked per day. It is thus appropriate to compare the incidence and duration of child labour before and after participation in such a programme, clearly defining what "unwanted child labour" means for a low-income family. The definition necessarily varies according to the target community's characteristics. For example, farm work should not be included as unwanted child labour in the family farm context. In all cases, but especially in rural areas, the basic criterion is the number of hours worked. Despite evidence of the limited relevance of child labour in the Brasilia target population, the family registration questionnaire was unable to define child labour clearly, thus hindering the assessment of the programme's impact on this item.

Since food is still perceived as the most basic consumer need, one should examine to what extent the increased income provided by the programme improves the nutrition and health of children in beneficiary families, including children under 7 years of age. The most appropriate indicators are anthropometrical measurements and the clinical examination of children at the baseline date and at the end of each year in the programme.

2.2 Impact on the family

In principle, a desirable programme objective would be to enhance adult engagement in the labour market, specifically formalizing labour relations and increasing family income. However, meeting this goal is not very likely if the target population consists of structurally poor families.⁵ A more realistic objective would be to improve adult qualification considering their current profile and actual occupational possibilities in their community. The very multifaceted nature of the Programme in Brasilia should help create jobs for under-skilled labour through initiatives to improve living conditions (improvement of urban infrastructure, facilities to house new community services). The Programme's documentation and score criteria suggest formal employment as an objective, as opposed to what the Programme apparently views as the undesirable condition of self-employment. In reality, formal employment would appear to be an overly ambitious objective given the

⁵ Structural poverty is considered here as different from an essentially transitory situation of poverty, which is alleviated by favourable trends in the overall economic context.

characteristics of adults in the target population. Improved labour market status through access to any kind of work as a way of guaranteeing a regular income flow appears to be a more appropriate medium-term objective. Involvement of other government agencies in the Programme is essential to create such local work opportunities, considering the lack of physical and social infrastructure in the target communities.

Improvements in housing and living conditions related to the physical structure of homes and the presence of durable consumer goods should occur because of the improved income of the assisted families. In reality, even if participation in the programme does not lead to an increase in non-stipend family income, it is likely that after one or two years the family's housing and living conditions will have changed compared to when it originally enrolled. These conditions can improve (compared to families not enrolled in the programme) in as little as one year, which raises issues as to exclusion criteria.

Only the first two modules of the evaluation methodology for minimum income programmes discussed above are applied to the Federal District. The initial focus will be on the family selection process, specifically analysing the score criteria used to screen families applying for the school grant. The targeting issue is then discussed in detail. The third module, (evaluation of the Programme's results for families and children) is not discussed in this paper, but should be the object of a separate analysis in the near future.

3. Family selection system and score tables

The School Scholarship Programme established a detailed score system to orient the selection process for applicant families. Based on the total points from 13 tables,⁶ families receive a total score varying from negative to positive values. Families with 140 or more points are selected (we were not able to determine how this cut-off was defined). Families with at least 140 points were even allowed to have a baseline *per capita* income of up to 0.7 times the minimum wage, although the official documents had set this specific cut-off at 0.5.

The score prioritises families with dependants at risk (families with children and adolescents under special protective measures, malnourished children, elderly, people with disabilities etc.), families with the most dependants aged 14 years old and younger, single applicants, applicants and spouses with limited schooling or with a more adverse position in the labour market, families with precarious housing conditions, few durable consumer goods, and limited property, and those with the lowest income.

The criteria appear to be sound, but on closer inspection some inconsistencies emerge. The score for participation in the labour market, for example, ascribes points to both the applicant and the spouse. Thus, families without a spouse are jeopardized on this item. A family with an applicant who is not working and has no spouse receives only 20 points; if the applicant works the family receives at most 80 points. On the other hand, a family with an applicant and spouse who both work receives from 120 to 160 points, depending on their respective types of participation in the labour market. In addition, a distinction is made between self-employed individuals and those who do odd jobs, which in practice is the same type of participation in the labour market. Again, there is a

⁶ The 13 items are: priority inclusion in the programme because of special dependants in the family; number of dependants of 14 years of age and younger; marital status; applicant's level of schooling; spouse's level of schooling; applicant's situation in the labour market; spouse's situation in the labour market; dwelling status (owned, rented etc.); housing standard; *per capita* family income; number of durable consumer goods; property; and number of livestock and poultry.

peculiarity in the score in that it only considers unemployment in the case of spouses, whilst applicants are left out of this category.

The same critique for double counting of applicant and spouse is valid for the item concerning level of schooling. A family with an applicant and no spouse in which the applicant (usually female) is illiterate receives 50 points, whilst if there is an illiterate spouse (usually male) this doubles the score to 100 points. It is true that a family with an applicant and no spouse receives an extra 100 points, partially offsetting this flaw. At any rate, double scores do not appear reasonable for families with an applicant and spouse on the items referring to participation in the labour market and level of schooling. If the two items were to be scored, it would be better to ascribe points only to the applicant.

The score based on household density (number of family members/number of rooms) is confusing, allowing a family with 6 members in a single room to receive a lower score (35 points) than a family with 11 members in 5 rooms (50 points). It would be much simpler to ascribe a score directly proportional to the number of individuals per room (e.g., 10 points for 1 person per room, 20 points for 2 persons per room, etc.).

The score differentiates between housing that is rented, ceded, owned with adverse possession, and owned with a deed. The main element differentiating the rental/ownership variable should be the rent (or house payment, when applicable), which can represent a major additional expenditure for the family. In principle, there is no reason to ascribe more points for ceded housing than for home ownership. Note that housing quality is differentiated according to various items like electricity, running water, plumbing and sewage disposal, type of roofing and floor, wall materials, and state of construction, incorporated into the scoring system.

Differentiation in scores according to *per capita* family income could be accentuated by increasing both the number of categories and the points allotted to each category. Allotting only 50 points to families earning up to 0.25 times the minimum wage *per capita* appears too low and may partially explain the fact that various families in this *per capita* income bracket were Non-selected. Since the Programme allows families earning up to 0.7 times the minimum wage *per capita* to be selected, it might be appropriate to allot more points to families with very low incomes in order to facilitate their inclusion.

The score for durable consumer goods, property, and livestock/poultry is also subject to criticism. For example, to own a telephone is a luxury for low-income Brazilian families. Telephone ownership receives minus 40 points, the equivalent of owning 24 chickens and slightly more than owning a horse cart. Therefore it is not surprising that many families with telephones were selected. Perhaps a more reasonable way of assessing such goods would be to ascribe a monetary value to each of them, penalizing families with more valuable goods. More detailed information on property would be needed, like taking a motor vehicle's year into consideration. For example, a family that owns a 1990s automobile could be automatically excluded from the Programme, regardless of other information.

In short, the scoring system that ultimately determines whether the family is included in or excluded from the School Scholarship Programme, should undergo a qualitative and quantitative evaluation and reformulation to better target participating families. The following is a list of suggested changes:

- eliminate double counting of applicants and spouses in the item referring to level of schooling;
- eliminate the score for applicants and spouses in the item referring to participation in the labour market;
- with regard to housing, differentiate only rental from ownership;

- reformulate the score for density (crowding) in housing, making it directly proportional to the number of occupants per room;
- further differentiate *per capita* family income using more categories, with the score inversely proportional to *per capita* income;
- ascribe a negative score to ownership of durable consumer goods directly proportional to the value of the respective goods, defining some goods whose ownership eliminates the family from the Programme;
- treat property in the same way as durable consumer goods;
- re-evaluate scores for various items so that the inter-group distribution reflects the importance ascribed to each respective item.

4. Selected versus non-selected families in Paranoá

This section presents data on selected families in Paranoá, then on non-selected families and finally compares the two groups. The discussion aims to show the actual capacity to identify the neediest families and to incorporate them into the Programme.

4.1 Selected families

Women constitute 96.8 per cent of the applicants. The Programme itself determines that male applicants are only accepted in exceptional cases. The Programme's leaflet calling on families to renew their registration in Paranoá explains that "the child's mother or guardian" should do enrolment. It also requests to see the documents of "the child's mother and her spouse, or those of the child's guardian". **Fewer than the table does not agree (19,2% is fewer than 20%, it should be considered both selected and non selected together)** 20 per cent of applicants are single, and some 60 per cent are married, whilst the rest reported some other marital status (Tables 1 and 2).⁷ Reflecting the fact that Brasilia is a relatively new city that attracts many migrants, more than 90 per cent of the selected applicants were born outside the Federal District.

Table 1. Applicants by gender

	Selected		Non-selected	
	Number	%	Number	%
Male	83	3.2	17	3.3
Female	2 544	96.8	491	96.7
Total	2 627	100.0	508	100.0

Table 2. Applicants by marital status

	Selected		Non-selected	
	Number	%	Number	%
Single	531	20.2	70	13.8
Married	1 573	60.0	333	65.7
Other	519	19.8	104	20.5
Total	2 623	100.0	507	100.0

⁷ The total number of informants in the various tables in this section can vary due to the lack of informants for some items.

One of the Programme's concerns is to avoid becoming a magnet for people residing outside the Federal District. Data show that most of the selected families have lived in the area for a long time. The Programme complied with this criterion. Only 19.4 per cent of applicants have lived in the Federal District for 5 to 9 years, whilst 22.8 per cent have lived there for at least 25 years (Table 3). Only 3 selected families have lived for less than 5 years in the Federal District.

Table 3. Applicants by time of residence in Federal District, Paranoá

	Selected		Non-selected	
	Number	%	Number	%
< 5 years	3	0.1	0	0.0
5-9 years	511	19.4	88	17.3
10-14 years	498	18.9	83	16.3
15-19 years	575	21.9	125	24.6
20-24 years	443	16.9	96	18.9
≥ 25 years	599	22.8	116	22.8
Total	2 629	100.0	508	100.0

The applicants' age profile reflects the Programme requirement of having children in the 7-14-year bracket. Some 90 per cent of all applicants are between 25 and 49 years of age, with a mean age of 37 years. The spouses (usually male) are older. Some 86 per cent are 30 to 59 years of age, with a mean age of 40 years (Tables 4a and 4b).

Table 4a. Applicants by age bracket

	Selected		Non-selected	
	Number	%	Number	%
15-19 years	3	0.1	1	0.2
20-24 years	57	2.2	7	1.3
25-29 years	402	15.6	86	16.1
30-39 years	1 267	49.0	242	45.3
40-49 years	652	25.2	123	23.0
50-59 years	161	6.2	65	12.2
≥ 60 years	42	1.6	10	1.9
Total	2 584	100.0	534	100.0

Table 4b. Spouses by age bracket

	Selected		Non-selected	
	Number	%	Number	%
15-19 years	1	0.1	1	0.3
20-24 years	20	1.3	5	1.6
25-29 years	141	9.2	28	8.7
30-39 years	685	44.7	134	41.6
40-49 years	472	30.8	112	34.8
50-59 years	158	10.3	32	9.9
≥ 60 years	54	3.5	10	3.1
Total	1 531	100.0	322	100.0

The level of schooling among applicants is extremely low: 26.4 per cent of the selected ones are illiterate; 61.9 per cent are barely literate or functionally illiterate; 10.4 per cent have had a primary education; and only 1.3 per cent a secondary education. Slightly over 60 per cent of the applicants reported having spouses. Since nearly all of the applicants are women, most of the spouses are men. The spouses' level of schooling is even lower than that of the selected applicants: 33.7 per cent are illiterate; 58.8 per cent are barely literate/functionally illiterate; 6.6 per cent have a primary education; and 0.9 per cent have reached secondary school.

Thus, the combination of poverty and limited schooling is a reality in Brasilia, suggesting that the Government of the Federal District is correct in developing a Programme to encourage poor families to enrol their children in school (Tables 5a and 5b).

Table 5a. Applicants by schooling

	Selected		Non-selected	
	Number	%	Number	%
Literate	649	26.4	116	22.8
Barely literate	1 626	61.9	308	60.6
Primary	273	10.4	74	14.6
Secondary	34	1.3	10	2.0
Total	2 627	100.0	508	100.0

Table 5b. Spouses by schooling

	Selected		Non-selected	
	Number	%	Number	%
Literate	518	33.7	85	25.7
Barely literate	902	58.8	208	62.8
Primary	101	6.6	33	10.0
Secondary	14	0.9	5	1.5
Total	1 535	100.0	331	100.0

The Programme's usefulness is further attested by the age-grade lag in the children of participating families who are enrolled in school. This lag increases with age. Eight-year-olds, who should be enrolled in the second grade (of primary school), are already one year behind in school. By the time they reach 10 they are more than 2 years behind. At 14, they are 4 years behind (Table 6). The fact that children aged 7 to 14 years must attend school is a first step to reduce this age-grade lag and should be bolstered by other measures of a pedagogical nature.

Table 6. Age-grade lag in children attending school, Paranoá (grade-lag measured in number of years behind)

	Selected %	Non-selected %
7 years	0.3	0.2
8 years	1.0	1.0
9 years	1.7	1.6
10 years	2.1	2.1
11 years	2.5	2.5
12 years	2.9	2.8
13 years	3.2	3.2
14 years	3.6	4.0

Work

Over 50 per cent of applicants reported working. This is close to the mean occupation rate for adult women in Brazil (as mentioned, nearly all applicants are women). Among those selected who report working, 45.5 per cent are salaried workers and 53.9 per cent are self-employed/odd-jobbers (Tables 7a and b, 8a and 8b).

Table 7a. Applicants' working status

	Selected		Non-selected	
	Number	%	Number	%
Working	1 398	53.2	293	57.7
Not working	1 229	46.8	215	42.3
Total	2 627	100.0	508	100.0

Table 7b. Spouses' working status

	Selected		Not selected	
	Number	%	Number	%
Working	521	86.7	29	96.7
Not working	80	13.3	1	3.3
Total	601	100.0	30	100.0

Table 8a. Applicants' occupational status

	Selected		Non-selected	
	Number	%	Number	%
Salaried	636	45.5	120	41.0
Self employed/ odd-jobber	754	53.9	172	58.7
Farmer	8	0.6	1	0.3
Total	1 398	100.0	293	100.0

Table 8b. Spouses' occupational status

	Selected		Non-selected	
	Number	%	Number	%
Salaried	155	29.8	7	24.1
Self employed/ odd-jobber	366	70.2	22	75.9
Farmer	0	0.0	0	0.0
Total	521	100.0	29	100.0

The percentage of spouses working is higher than that of applicants, reflecting the fact that most of the spouses are men, who normally have higher occupation rates than women. Wage earning is even less frequent among spouses than applicants, with only 29.8 per cent of selected spouses earning salaries and 70.2 per cent self-employed or odd-jobbers. These rates are indicative of the spouses' precarious status in the labour market.

Family size and composition

Characterization of selected families provides new information. Families have a mean of 5.1 members and a median of 5 members. These are large families by Brazilian standards (average 4 members, Table 9).

Table 9. Number of family members

	Selected		Non-selected	
	Number of families	%	Number of families	%
2 members	83	3.3	45	9.2
3 members	316	12.4	108	22.0
4 members	635	24.9	120	24.5
5 members	614	24.1	108	22.0
6 members	473	18.5	61	12.4
7 members	238	9.3	22	4.5
8 members	102	4.0	13	2.7
9 members	47	1.8	9	1.8
≥ 10 members	45	1.8	4	0.8
Total	2 553	100.0	490	100.0

One concern for any programme that distributes resources based on *per capita* family income is the number of family members. A more numerous family is expected to be associated with lower *per capita* income and may determine whether the family is included in a programme. However, there is no indication that the size of selected families has been artificially inflated. In short, the type of family among applicants corresponds exactly to the standard Brazilian family organization (a basic nuclear family), whose members have direct blood kinship ties, with extended families being the exception: applicants, spouses, and children comprise nearly all of the members, whilst grandchildren, parents of applicants, fathers or mothers-in-law of applicants, and other family members comprise only 2.2 per cent of total members in these families. More than half of the members of selected families are children up to 14 years of age, 13.1 per cent are children over 15 years, 19.8 per cent are applicants, and 11.9 per cent are spouses (Table 10).

Table 10. Family composition (number of persons)

	Selected		Non-selected	
	Number of persons	%	Number of persons	%
Applicants	2 629*	19.8	508	22.4
Spouses	1 589	11.9	339	14.9
Dependents (0-14 years)	7 267	54.6	1 136	50.0
Children	7 054	53.0	1 104	48.6
Grand children	181	1.4	25	1.1
Others	32	0.2	7	0.3
Dependents (≥ 15 years)	1 823	13.7	289	12.7
Children	1 750	13.1	278	12.2
Grand children	7	0.1	0	0.0
Parents	34	0.3	8	0.4
In-laws	6	0.0	1	0.0
Others	26	0.2	2	0.1
Total	13 308	100.0	2 272	100.0

*The total number of informants varies due to the lack of informants for some items.

Income and expenses

As expected, selected families have very low incomes: 24.0 per cent have up to one minimum wage, 73.9 per cent up to twice the minimum wage, and 93.5 per cent up to three times the minimum wage (Table 11a). Median income was R\$159.00 and mean income R\$175.40. For 29.0 per cent of families, *per capita* family income is up to 0.25 times the minimum wage *per capita*, for 85.2 per cent it was up to 0.5 times the minimum wage, and for 99.1 per cent, up to 0.7 times the minimum wage. These families were all thus situated below the traditional poverty lines for Brazil. Mean *per capita* family income was only R\$36.30 and the median R\$35.00. The change in the selection limit from not more than 0.5 times the minimum wage *per capita* to not more than 0.7 times permitted an expansion in the range of families benefited, which in the case of Paranoá concerned almost 15 per cent of the selected families (Table 11b).⁸

Given the income data, the school grant's importance in the family budget is evident. Despite the relatively modest amount of the stipend, R\$100.00 is the equivalent of 62.9 per cent of median family income and 57.0 per cent of mean family income in the Programme's beneficiary population.

Reported sources of family income show that the bulk comes from work by applicants (36.9 per cent) and spouses (42.9 per cent). The rest consists of income from other family

⁸ Families with a *per capita* income of more than 0.7 times the minimum wage are residuals.

members (5.6 per cent), child support (4.2 per cent), rent (3.4 per cent), and other lesser items (Table 11c). Since a large proportion of the other family members are children, their individual contribution to the family budget is small. Thus, the school grant more than compensates for a possible loss of income because of mandatory school attendance.

Table 11a. Total family income

Amount (R\$)	Selected		Non-selected	
	Number of families	%	Number of families	%
≤ 100	630	24.0	47	9.3
101 - 200	1 311	49.9	198	39.0
201 - 300	514	19.6	147	28.9
301 - 400	134	5.1	80	15.7
401 - 500	27	1.0	22	4.3
501 - 600	8	0.3	8	1.6
601 - 700	2	0.1	4	0.8
701 - 800	1	0.0	1	0.2
801 - 900	0	0.0	0	0.0
901 - 1 000	0	0.0	1	0.2
Total	2 627	100.0	508	100.0

Table 11b. Per capita income of families

Amount (R\$)	Selected		Non-selected	
	Number of families	%	Number of families	%
≤ 25	740	29.0	54	11.0
25.01 - 50	1 436	56.2	191	39.0
50.01 - 70	341	13.4	66	13.5
70.01 - 100	33	1.3	143	29.2
100.01 - 125	3	0.1	20	4.1
125.01 - 150			11	2.2
150.01 - 175			3	0.6
175.01 - 200			0	0.0
200.01 - 225			2	0.4
Total	2 553	100.0	490	100.0

Table 11c. Source of family income

Activity	Selected		Non-selected	
	Amount in R\$	%	Amount in R\$	%
Work of applicants	170 332	36.9	45 907	37.6
Work of spouses	198 323	42.9	54 052	44.2
Work of other members	25 911	5.6	4 103	3.4
Pension	19 566	4.2	3 971	3.2
Retirement	7 851	1.7	2 694	2.2
Rent	15 498	3.4	4 609	3.8
Food stamps	3 293	0.7	1 685	1.4
Others	21 194	4.6	5 175	4.2
Total	461 968	100.0	122 196	100.0

The selected family budget structure is compatible with reported income. Means, medians, and quartiles for expenses are lower than the corresponding income figures. By way of illustration, whilst mean family income is R\$175.40, mean family spending is R\$156.00. It is clear that both variables may be underreported, but they are mutually consistent nonetheless. Likewise, mean *per capita* income is R\$36.30, whilst mean *per capita* spending is only R\$32.70. As expected, itemized analysis of spending shows that the largest share goes to food (63.2 per cent). Among other items, spending on water is surprisingly high (10.4 per cent) and on transport surprisingly low (3.0 per cent), which may be peculiar to the Paranoá area (Tables 12a, b and c).

Table 12a. Total family expenditure

Amount (R\$)	Selected		Non-selected	
	Number of families	%	Number of families	%
≤ 100	541	20.6	56	11.0
101 - 200	1 594	60.7	276	54.3
201 - 300	413	15.7	128	25.2
301 - 400	66	2.5	31	6.1
401 - 500	13	0.5	11	2.2
501 - 600			4	0.8
601 - 700			1	0.2
701 - 800			1	0.2
Total	2 627	100.0	508	100.0

Table 12b. Per capita family expenditure

Amount (R\$)	Selected		Non-selected	
	Number of families	%	Number of families	%
≤ 25.00	841	32.9	76	15.5
25.01 - 50	1 466	57.4	241	49.2
50.01 - 70	226	8.9	83	16.9
70.01 - 100	19	0.7	71	14.5
100.01 - 125	1	0.0	14	2.9
125.01 - 150			3	0.6
150.01 - 175			2	0.4
Total	2 553	100.0	490	100.0

Table 12c. Spending by item

Item	Selected		Non-selected	
	Amount (R\$)	%	Amount (R\$)	%
Rent	10 408	2.5	2 217	2.3
House payments	449	0.1	96	0.1
Food	263 998	63.2	57 219	58.7
Water	43 510	10.4	9 243	9.5
Light	31 860	7.6	7 632	7.8
Gas	16 656	4.0	3 261	3.3
Transportation	12 371	3.0	4 138	4.2
Other	38 566	9.2	13 711	14.1
Total	417 818	100.0	97 517	100.0

Housing, durable consumer goods and property

Living conditions in the selected families can be further illustrated by information about their dwellings. Three out of four families own their homes, more than half of which are brick-and-mortar, with what is considered finished construction. More than two-thirds have brick or cement floors. Nearly all of the homes have zinc or sheet roofing and are wired to public electricity. Only three out of four homes have running water, whilst slightly over two-thirds have sewage systems. These data suggest that although housing conditions are somewhat precarious, they do not appear to be the main problem for the population in Paranoá (tables 13a to 13f).

Table 13a. Housing status

Type of occupancy	Selected		Not selected	
	Number of cases	%	Number of cases	%
Rented	138	5.3	25	4.9
Ceded	531	20.2	80	15.8
Own	1 957	74.5	402	79.3
Total	2 626	100.0	507	100.0

Table 13b. Construction situation

	Selected		Not selected	
	Number of cases	%	Number of cases	%
Started	125	4.8	17	3.4
Interrupted	389	14.9	60	11.8
Finishing in progress	733	28.0	175	34.5
Finished	1 372	52.4	255	50.3
Total	2 619	100.0	507	100.0

Table 13c. Type of walls

	Selected		Not selected	
	Number of cases	%	Number of cases	%
Wallboard	1 004	38.2	156	30.8
Wood	156	5.9	17	3.4
Adobe	64	2.4	5	1.0
Masonry	1 402	53.4	329	64.9
Total	2 626	100.0	507	100.0

Table 13d. Type of floors

	Selected		Not selected	
	Number of cases	%	Number of cases	%
Packed earth	234	8.9	22	4.3
Slab	440	16.8	98	19.3
Brick/cement	1 805	68.7	302	59.6
Tile/floorboards/slate	147	5.6	85	16.8
Total	2 626	100.0	507	100.0

Table 13e. Type of roofing

	Selected		Not selected	
	Number of cases	%	Number of cases	%
Plastic/canvas	6	0.2	3	0.6
Zinc/sheet roofing	2 450	93.3	427	84.4
Slab	76	2.9	44	8.7
Ceramic tile	93	3.5	32	6.3
Straw	1	0.0	0	0.0
Total	2 626	100.0	506	100.0

Table 13f. Electricity

	Selected		Not selected	
	Number of cases	%	Number of cases	%
Yes	2 531	96.3	495	97.4
No	98	3.7	13	2.6
Total	2 629	100.0	508	100.0

In relation to ownership of durable consumer goods, the main item is the gas stove, which nearly all households have. Two-thirds of the selected families have refrigerators

and half have electric mixers and colour television sets. Between one-third and a half have sound systems, bicycles, black and white television, radio, and clothes washers. Among the least frequent durable goods, a surprising 8.8 per cent of the families reported having a telephone (Table 14).

Table 14. Durable consumer goods

	Selected		Non-selected	
	Number of families	%	Number of families	%
Gas stove	2 542	96.7	498	98.0
Refrigerator	1 737	66.1	4.6	79.9
Mixer/blender	1 316	50.1	319	62.8
Colour television	1 304	49.6	344	67.7
Sound system	1 177	44.8	296	58.3
Bicycle	1 116	42.4	269	53.0
Black and white television	966	36.7	127	25.0
Radio	924	35.1	176	34.6
Washing machine	899	34.2	231	45.5
Sewing machine	455	17.3	129	25.4
Telephone	231	8.8	156	30.7
Video cassette recorder	20	0.8	19	3.7
Total	2 629	100.0	508	100.0

A second surprise relates to motor vehicle ownership, since 78 of the selected families own an automobile, i.e., some 2.3 per cent of the families. Most of them are passenger, non-utility vehicles. It is true that many of these cars are over 15 years old, but there were some 1990s models, and even one made in 1994 (Table 15).

Table 15. Motor vehicle ownership

	Selected		Non-selected	
	Number of cases	%	Number of cases	%
Do not own	2 548	97.0	457	90.1
Utility	17	0.6	15	3.0
Passenger	61	2.3	35	6.9
Total	2 626	100.0	507	100.0

Other types of property included another house, another lot, or a business establishment. A total of 43 selected families (1.6 per cent of the total) own other such property (Table 16).

Table 16. Property ownership

	Selected		Non-selected	
	Number	%	Number	%
Another house	3	0.1	8	1.6
Business establishment	17	0.6	12	2.4
Another lot	23	0.9	17	3.3
Horse cart	27	1.0	7	1.4
Total families with property	70	2.6	44	8.7
Total families	2 629	100.0	508	100.0

The conclusion is that ownership of durable consumer goods is quite widespread among the population selected to participate in the Programme in Paranoá, especially for

less valuable goods. Ownership of more expensive goods is not as common, but does exist. These results may seem surprising at first sight but can be explained as follows: first, such goods may be gifts from people with higher incomes; second, most of these goods have been acquired second-hand and depreciated by prior use; and third, stabilization of the Brazilian economy has made it possible to purchase goods on credit, with relatively low instalments, such that the total price doubles or triples due to the extortionate interest rates prevailing in the country. Workers with signed work papers or a generous boss (in this case, usually applicants who work as domestics for middle or upper class housewives) can have easier access to credit.

4.2 Non-selected families

This section analyses some aspects of living conditions among non-selected applicants. Applications were turned down in 1996 from 508 families. Analysis of data for these families shows that although their gender, marital status and age characteristics correspond to those of the selected families, their living conditions are more favourable: higher mean schooling, better participation in the labour market by both applicants and spouses, smaller families and fewer dependants 14 years of age and younger.

The more favourable living conditions appear in housing: a higher percentage of home ownership; more brick-and-mortar houses; ceramic tile, wooden, or slate flooring; slab or ceramic tile roofing; running water; and plumbing/sewerage, all characteristic of adequate housing conditions.

The income level of non-selected families is considerably higher than that of selected ones. Mean family income is R\$240.50 and median income R\$220.00 among non-selected families. The lowest quartile earns R\$150.00 and the third quartile earns R\$300.00. The difference is even more pronounced for *per capita* family income. Mean *per capita* family income is R\$60.00, or 65 per cent more than in selected families. Half of non-selected families reported *per capita* income up to half the minimum wage, suggesting that their non-selection reflects other information identified by the Programme administrators. Nearly 30 per cent of the non-selected families reported *per capita* income over 0.7 times the minimum wage, an amount that corresponds in practice to the maximum limit set for inclusion in the Programme.

As expected, non-selected families spend more than selected ones. Mean spending by non-selected families is R\$192.00, i.e., 23 per cent higher than that of selected families. Mean *per capita* spending is R\$48.00, or 47 per cent more than that of selected families. The share of food in the family budget of non-selected families (58.7 per cent) is less than for selected families (63.2 per cent), demonstrating the consistency of the results. In addition, spending is compatible with reported income.

Ownership of durable consumer goods confirms the more favourable living standard of non-selected families. Among the 13 consumer goods surveyed, the percentage of ownership by non-selected families is lower than that of selected families for only two items, black and white television sets and radios. Black and white TV sets are replaced by colour sets and radios by sound systems, both of which were also listed in the survey. More than 30 per cent of non-selected families have telephones and 10 per cent own motor vehicles. Among non-selected families nearly 70 per cent own colour TV sets and 80 per cent own refrigerators. They also show higher rates of ownership of properties such as houses, another lots and business establishments (see Table 16).

Therefore, the conclusion is that the Programme has succeeded in differentiating relatively better-off families among those applying for school grants for their children. Other criteria besides *per capita* income show that non-selected families tend to have better living conditions than selected ones. This means that despite the criticism of the

scoring system, its overall parameters are appropriate. The fact that some families (11 per cent of the total) with *per capita* income below 0.25 times the minimum wage were excluded, whilst a few families (0.8 per cent) with *per capita* income 0.7 times the minimum wage were included is explained by the score tables incorporating a series of other items besides *per capita* family income.

5. Evaluation of the programme's targeting

Implementation of the School Scholarship Programme began in 1995 and progressed quickly. In December 1996 it already benefited 19,400 families or roughly half of the target population, based on 1995 data from the National Sample Survey of Households (PNAD), an estimated total of 35,000 families in the Federal District as a whole met the Programme's selection criteria that year.

Concerning the programme's coverage, two fundamental issues need to be addressed. The first relates to the way families were incorporated into the Programme based on a localization criterion. The Programme's coverage was increased by progressively incorporating administrative sub-areas of the Federal District with high poverty rates. In 1996 the Programme operated in eight sub-areas. Since available funds allow for the inclusion of all the families that meet the current selection criteria, there were two options for allocating these funds. The first was to maintain the focus on families with children from 7 to 14 years old (same target public can be kept), whilst making the other selection criteria less rigid. Or the Programme could gradually incorporate families with children from 0 to 6 years of age. These two options have different implications both operationally and in terms of social justice, which will be not discussed here.

The second question refers to targeting, that is to what extent the set of families that have received the school grant actually correspond to the intended target public as originally conceived by the Programme.

This section aims to bring subsidies for evaluating targeting. Taking the 1995 PNAD as the reference and using the Programme criteria, we compare the characteristics of the beneficiary population in Paranoá and the population for the Federal District as a whole, demarcated according to the same criteria: income level, presence of children from 7 to 14 years of age and time of residence in the Federal District. Income results indicate that the targeting process was successful in Paranoá, since the beneficiary population and that demarcated according to PNAD parameters are highly similar. Although there are differences in occupational and schooling characteristics, there is no evidence that families attempted to benefit (or were successful in benefiting) improperly from the Programme. Occupational and schooling indicators suggest that the selected population has worse living conditions than the population demarcated according to the same PNAD criteria, which would be a desirable result of the selection process.

According to PNAD micro-data for a population of 1.7 million inhabitants in Brasilia, in 1995 some 342,500 individuals (81,900 families) had a *per capita* family income below 70 per cent of the minimum wage, the income criterion actually adopted by the Programme. The criteria based on time of residence in the Federal District and children from 7 to 14 years of age shrink this group to 148,800 individuals or 8.6 per cent of the resident population (Table 17). It is this population, demarcated according to the same selection criteria as those adopted by the School Scholarship Programme that serves as the reference for evaluating the targeting in Paranoá.

Table 17. Cumulative selection criteria for the Programme as applied to the Federal District population

	Individuals (thousands)	%	Families (thousands)	%
Relevant population	1 716.1	100.0	477.8	100.0
Per capita income <0.7 minimum wage	342.5	17.1	81.9	17.1
>5 years residence in Federal District	221.0	12.9	52.8	11.1
Children 7-14 years	148.8	8.6	35.6	7.4

5.1 Income

The selection aimed to benefit the set of families (among those) identified exclusively according to the three basic criteria. Although the mean family income is only 3 per cent lower for the selected families than for the reference population, when family size is taken into account, the difference in per capita family income is significantly greater, at 19 per cent (Table 18). Taking 66 per cent of the minimum wage as the poverty line, the income gap providing a measure of the intensity of poverty was also higher in the case of the selected population, which is a desirable result.

Table 18. Income, family size and poverty of the selected and reference populations

	Selected population	Reference population
Mean family income (R\$)	175.4	180.4
Mean per capita income (R\$)	36.3	43.2
Mean family size	4.8	4.2
Gap ratio	0.45	0.35

Source: IBGE/PNAD, 1995 School Scholarship Programme (Paranoá register)

5.2 Family composition

The majority of the selected families have a family head and spouse present, whilst the other 40 per cent are single-parent families. Although in the reference population, the percentage of single-parent families is lower (33 per cent), the difference is not due to the selection process among applicant families since the single parent family rate was already greater among them (38 per cent). If in the future this discrepancy intensifies, it should serve as a warning that the Programme may be promoting absence of the head-of-family (probably the male spouse with an income) due to attempts to help the family group qualify for the school grant (Table 19).

Over 50 per cent of families in Paranoá include children, significantly higher than in the reference population. However, it should be emphasized that nearly all the minors are children and stepchildren, of those parents and that their kinship with the applicant is easy to prove. Therefore there is no suggestion of artificial incorporation of minors (relatives and others) into the family nucleus in order to qualify for the Programme stipend.

Table 19. Family composition

	Selected population	Reference population
% of single-parent families in total families	40	33
Family composition (%)	100.0	100.0
Applicant and spouse	31.7	37.7
Minors from 0 to 14 years of age	54.6	45.1
- of which, family's own children/stepchildren	97.0	96.0
other children 0-14 years of age	3.0	4.0
Other 15 years of age or more	13.7	17.2
- of which, family's own children/stepchildren	95.0	75.0
other	5.0	25.0

Source (IBGE/PNAD, 1995 School Scholarship Programme, Paranoá Register)

* Head of household

5.3 Participation in the labour market

Figures on the rate of occupation (in the labour market) are high for both applicants and spouses (Table 20). Considering that 97 per cent of the applicants are women and that 60 per cent are married,⁹ we compared occupation rates among categories used in the programme with those of various categories derived from the PNAD reference population, i.e., females 10 years of age and over, spouses, and female spouses. In all cases there were evident differences. In the case of individuals classified as “spouses” by the Programme, we compared the category of head-of-family in the PNAD reference population and again obtained occupation rates that were significantly higher among the families in Paranoá. These differences are understandable considering that some 40 per cent of the Programme applicants are heads-of-families, which makes it difficult to compare either: 1) Programme applicants and PNAD spouses or 2) Programme spouses and PNAD heads-of-families. To reduce the effects of conceptual incompatibilities between the Programme and PNAD categories, we analyse the applicants and spouses jointly (for the Programme) versus spouses plus family heads (for PNAD). Although this reduces the discrepancies between the occupation rates in both cases, the rate for the Programme is still 11 percentage points higher than that of the PNAD.

It is possible that the high occupation rate is the result of applicant families' perception that participating in the labour market, that is, positioning one's self so as to obtain income to provide for the family's needs, is a desirable characteristic with a potentially positive effect on the family's selection by the Programme.

Table 20. Occupation rate (%) according to position in the family

Programme concept of family status	Occupation rate		PNAD concept of family status
	Selected population	Reference population	
Applicant	53.2	23.3	Spouse
		26.6	Female ≥ 10 years old
		22.5	Female spouses
Spouse	86.7	62.2	Head of families
Applicant + spouse	59.4	48.4	Spouse + head of family
Others over 15 years old	19.3	31.4	Others over 15 years old

Source (IBGE/PNAD, 1995 School Scholarship Programme, Paranoá Register).

⁹ The information probably refers to legal marital status, so that the percentage would be higher if it included common-law marital unions.

The opposite occurs when considering other family members over 15 years old who do not belong to the two categories already analysed: the occupation rate is significantly lower in the Programme than in the PNAD sample. Although incorporating unoccupied members into the family could be a strategy to shrink *per capita* family income, the effect would be limited when considering the selected population as a whole (table 19): with a share of only 14 per cent of the family members (as a whole), occasionally omitting a work situation for one of these individuals (most of whom are children, grandchildren, and stepchildren, thus with unquestionable kinship links) would tend to have only a marginal effect on the family's reported income.

5.4 Education

Literacy of applicants and spouses is the most important factor both for potential participation in the labour market and for obtaining income, with additional implications on family care, particularly care of children, whom constitute the Programme's priority target group, given the selection criteria.

Table 21. Illiteracy rates among the selected and reference populations (%)

Programme concept	Selected population	Reference population	PNAD concept
Applicants	26.4	16.1	Spouse
Spouses	33.7	17.7	Head
Applicants and spouses	29.1	17.1	Spouse + Head of the family

Source (IBGE/PNAD, 1995 School Scholarship Programme, Paranoá Register).

Illiteracy rates among applicants and spouses are much higher than in the reference population (Table 21), an expected result since the Programme's selection criterion ascribed more points to illiterate applicants and spouses. Even adding the two categories together, the discrepancy remains, since in the case of the PNAD sample the rates are similar for heads-of-families and spouses. This high illiteracy rate can be expected to have adverse effects on the individuals' ability to earn income from work and could partially explain why, despite the higher occupation rate in the selected as compared to reference population, the results in terms of family income are similar for the two population samples.

5.5 Household

Investigation of household characteristics in the Federal District based on PNAD data illustrate that with regard to living conditions in low-income population groups, the Federal District has an atypically favourable situation within the overall Brazilian context. Indicators for the target public both in the Federal District as a whole and Paranoá in particular show that the majority have adequate access to durable consumer goods and a relatively good household infrastructure insofar as it depends on income and consumption choices in the private sphere (Table 22). The fact that Paranoá's indicators are generally worse than those of the Federal District as a whole is explained by the fact that the areas that were first selected were in fact the worst off in terms of living conditions. In addition, the selection process itself that used the scoring system explicitly considering household characteristics resulted in beneficiary families displaying worse indicators than the applicant population as a whole.

Table 22. Household quality indicators (% of families)

Families having:	Selected population	Reference population
Adequate roofing	99.7	99.4
Gas stove	96.7	99.4
Electricity	96.3	98.2
Running water	76.1	n.a
Adequate water supply	n.a	83.4
Adequate sewage disposal	72	87.6
Own home	74.5	74.0
Indoor bathroom	66.8*	88.2
Refrigerator	66.1	76.3
Colour television	49.6	60.4
Black and white television	36.7	67.2
Telephone	8.8	22.5
Automobile	2.9	n.a

Source (IBGE/PNAD, 1995 School Scholarship Programme, Paranoá Register).

* indoor plumbing

The above indicators have different implications for selection. Access to electricity has a crucial impact on family living conditions, but it depends essentially on intervention by the public sector. Information for Paranoá and the Federal District show that access to electricity is virtually universal for even the lowest income segment of the population. The few households without electricity are located in the rural areas of the Federal District. Therefore, this indicator fails to distinguish more needy families from less needy ones. The same is not true for running water, since only 84 per cent of the applicant families are connected to the public water supply. A crucial aspect in the improvement of these families' living conditions is thus independent of the Programme's monetary stipend. The situation is more adverse with regard to sewage disposal. Few households are connected to the public sewer system (72 per cent), whilst the majority have cesspools (66 per cent). It is significant and worrisome that over one-fourth of the applicant families have inadequate sewage disposal, i.e., they are neither connected to the public sewage disposal system nor do they have cesspools, which has direct implications for the community's health. In this sense, to guarantee adequate access to sanitation infrastructure should be seen as one aspect of integrated support that should be provided to low-income families in the selected cities.

Whilst access to public services has repercussions on families' living conditions regardless of income, ownership or otherwise of the dwelling has direct implications on the capacity to consume. The most adverse situation is that of renters, since a portion of income is necessarily earmarked to pay for housing. Although the Programme ascribed the highest scores to rented housing, it might be more appropriate to subtract a percentage from the reported income of families paying rent. Definition of this percentage should preferentially be based on an exogenous source, like the IBGE Family Budget Survey, rather than on the Programme registration data. The adoption of such a procedure would mean treating income more precisely, leaving the score system to deal with aspects of living conditions that cannot be directly quantified.

Some consumer items are owned by virtually everyone and thus fail to differentiate the families. An example is gas stoves, which were properly scored as 0. Items with a relatively high unit value in relation to family income, like VCRs, colour TVs, telephones, and motor vehicles are the best for differentiating families' living conditions, and are thus essential elements for a critical analysis of income information. In Paranoá these indicators are generally lower than those in the reference population, with the selection process also operating in the sense of reducing them.

6. Other elements in the evaluation methodology

This section identifies elements which should be incorporated into future work when the Programme is in full operation, allowing for a more solid evaluation.

First of all, it is essential to develop objective criteria for interrupting the stipend and excluding beneficiary families. The fact that a family is selected for the Programme should not necessarily mean that it will remain as its beneficiary until the children reach 14 years. "Bonus points" could be created to avoid a situation in which the same family repeatedly enters and leaves the Programme. The re-registration process in Paranoá in 1996 shows that in fact there was a re-evaluation of the beneficiary population: 85 per cent of the families were retained in the Programme, but unfortunately it was not possible to analyse the criteria used to disconnect the other 15 per cent of families.

Another important aspect is the need for a systematic follow-up of beneficiary families. Whilst recognising the difficulties programmes must deal with as they grow, all families should be visited before being included in the Programme as a way of verifying their real situation *in loco*. In the Federal District, the approach is to visit a sample of households only at the time of the family selection. A better approach would be a monthly visit to a selected sample of households. If a family no longer meets the Programme's requirements, it should be excluded. If it were observed that the family is experiencing major difficulties, special measures could be taken to help it. The main objective of the visits would be a regular follow-up on the families, verifying their difficulties and progress.

Since the School Scholarship Programme has only been in operation for a relatively short time, its impact on the beneficiary population cannot be evaluated. Such an evaluation is naturally a fundamental part of the methodology, in particular regarding the educational component and more generally the family's living conditions in both the short and long term.

Improved quality of teaching and application of standardized tests require an on-going effort at pedagogical improvement of the public school system and (with regard to the programme) special attention towards specific deficiencies in the target children. This requires institutional mobilization to back the Programme, especially within the Department of Education. In addition, administrators and teachers in participating schools must be convinced of the Programme's importance and willing to make the necessary changes in the school so as improve the attainment of specific educational objectives. In fact, a survey of teachers in late 1995 revealed lack of information and a high degree of scepticism in relation to the Federal District's Programme. Thus, at least once a year, there should be information gathering from both pupils and teachers going beyond the aspects related to regular evaluation, like passing, failing and drop-out rates. These are essential to orient corrective measures for problems detected in the educational area of the Programme.

Systematic evaluation of the other aspects of family life could be conducted during the annual re-registration, using a questionnaire to investigate the same characteristics as in the baseline registration, plus covering some additional specifically relevant items. The information should be compared with that of families at the beginning of the Programme in order to allow for an evaluation of the immediate and direct impacts on income, probably affecting the household's living standard and consumption profile. An analysis of these variables would shed light on the value of the stipend, potentially suggesting an increase or decrease in the amount so as to maximize the benefits of the Programme's aggregate expenditure.

With regard to the variable most directly linked to families' current income, i.e., the adults' situation in the labour market, the evaluation should take account of the fact that changes in labour status directly due to the Programme are not very likely, and that modest changes that may occur will certainly take time. It would be desirable to eliminate the Federal District Programme's bias in favour of the formal sector, as observed in the requirement that unemployed and self-employed adults be enrolled in the National Employment System. The characteristics of the selected population show clearly that the majority of those working are self-employed. Labour economists well know that self-employed and salaried workers are quite different and that wishful thinking is not enough to turn a self-employed worker into a salaried one. Furthermore, self-employed workers often make more money than wage earners with similar characteristics.

Thus, for a major proportion of the Programme's beneficiaries, being a self-employed worker is a definitive situation. Much better than the current recommendation would be to enrol willing unemployed and self-employed workers in vocational training courses promoted by the Department of Labour. This may allow them to increase their income, possibly still as self-employed workers. In this sense, the evaluation should concentrate changes in work conditions that represent an improvement in relation to the prior situation (less hazardous work, place of work closer to home, greater satisfaction, and potentially better pay). Such results would depend on the specific focus on occupational improvement, which goes beyond the more immediate objectives of income transfer and the children's education.

Finally, there are other elements in the evaluation methodology for minimum income programmes that were not considered in this paper. They relate to institutional aspects such as linkage between the various government agencies, sources of funding, costs, etc. An in-depth analysis of these aspects would require information on the routine functioning of the administrative apparatus in the Federal District.

7. Conclusions and recommendations

A comparative analysis of characteristics in groups selected for and excluded from the Programme in Paranoá shows that the criteria based on the scoring system succeeded in properly distinguishing between the two groups. In analogous fashion, comparison of the selected population with the reference population based on data from the National Sample Survey of Households (PNAD) for the Federal District as a whole and using the same selection criteria adopted by the Programme shows that the Programme was properly targeted and that the family selection criteria and procedures (albeit subject to some criticism and suggestions for improvements) functioned successfully in the initial implementation of the Programme in Paranoá. Some comments and recommendations are in order with regard to the selection criteria.

Although income level should continue to be used as a basic reference for publicising the Programme, the score should continue to ascribe a secondary role to this information, given the potential for fraud or cheating and the observed difficulties in documenting this parameter. It is important to note that characterization of the selected families in Paranoá shows the compatibility of their income characteristics with those of the reference population, which in principle rules out the possibility of significant fraud having occurred.

However, as the Programme becomes better known and awakens growing interest among other families, including among those who fail to meet the income criteria, there may be an increase in cheating on information provided during the application process. For this reason, it is recommended that:

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- family selection should follow criteria based on their level of need as observed through objective indicators of living conditions. In this sense, home visits to 100 per cent of the enrolled families is crucial, rather than just 25 per cent of the total as planned initially;
 - score criteria should relate essentially to family composition and observed living conditions, including ownership of durable consumer goods and property, in addition to household infrastructure (size of the home, durability of the construction materials, running water, plumbing/sewerage, etc.). As regards ownership of durable consumer goods and property, the score should focus heavily on items that differentiate the families. Ownership of highly valuable or non-essential goods like telephones and/or automobiles should exclude the family, since they are clearly incompatible with the socio-economic status of families that the Programme intends to benefit;
 - adverse access to basic public services, such as not being connected to the public water system, particularly precarious surroundings (hazardous location, precarious streets, lack of access to transportation) could serve as a score criterion benefiting families, in addition to indicating the need of government action in providing full assistance to Programme's beneficiaries. The issue is to guarantee not only supplementary income, but also support in the areas of health, nutrition, and social services in general, so as to ensure real improvements for families and foster their social integration;
 - score criteria relating to labour market status can be eliminated from the evaluation, since what is essential for selection is the set of objectively observed living conditions resulting from participation in the labour market via labour income. Recent data from the Monthly Employment Survey conducted by the IBGE show that income differences have decreased or even reversed between wage-earners and self-employed workers in the main metropolitan areas of Brazil. In addition, the score as defined does not appear very appropriate for establishing different categories and points. Thus, it is not immediately obvious why a wage earner should be classified as having a less adverse occupational situation than a self-employed worker (income level aside), from the Programme's point of view. Furthermore, what is the conceptual difference between an odd-jobber (*biscateiro*) and self-employed worker (*autônomo*) that may justify their receiving different scores? To what extent is a retiree or pensioner in principle in a more adverse situation, justifying that such an applicant receive a higher score than an applicant who is not working? Indirectly, this could imply an age criterion.

In relation to the Programme's future development and continuity, comparison with the poor population from the Federal District as a whole based on PNAD data showed that rapid progress was made towards total coverage by the Programme. Questions inevitably arose about the direction the Programme would take in the future. Two issues emerged. The first related to criteria used to demarcate the target population. If the criterion of having children in the family is justified as a policy for eliminating poverty by fighting its causes, the question arises as to whether it would be fair to continue to exclude from the Programme families with children under 7 years of age. It might be more appropriate to expand the potential target population in this direction, even though this might involve eliminating some of the relatively better-off families according to the current criteria. In this case, adverse maternal and child conditions should be introduced as score criteria. An alternative would be to consider a reduction in the amount of the stipend in order to serve more families according to expanded criteria. The current stipend is relatively high in comparison to the income of beneficiary families: nearly three times the *per capita* income and 57 per cent of mean family income.

The second issue related to the Programme's exclusion criteria. In principle, it is reasonable to use the same entrance criteria, but with "bonus points" in the score to avoid families repeatedly entering and leaving the Programme. The appropriate degree of flexibility in the criteria used for a family to remain in the Programme is a function of the amount of slack in the funds allocated for the Programme. Naturally, the more comfortable the Programme's budget situation, the greater the possibility of maintaining beneficiary families that are already in a better situation than those applying for the first time. The exclusion criterion of "having significantly increased the family's income" (Distrito Federal, 1995, *op. cit.*, p. 18) sounds rather dubious and operationally complicated. In reality, the most appropriate approach is not to attempt to flexibilize the income criterion, but to minimize its role, both as an inclusion and exclusion criterion.

The scope of this paper was limited to the application of a few items from the methodology proposed to evaluate minimum income programmes. Further development of this line of investigation should analyse the impacts on children and families benefited by the Programme. In addition, complete evaluation of the Programme inevitably entails a discussion of the necessary linkages among the agencies involved in the process and a series of related measures taken by the Government of the Federal District to maximize the Programme's efficiency. In many ways, such measures go well beyond educational aspects. The recommended design for minimum income programme goes well beyond transferring income to low-income families. It implies its integration to a broad range of initiatives whose ultimate objective would be to break the poverty cycle that condemns millions of Brazilian families and their descendants to lifelong poverty.

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