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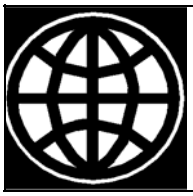

Social Protection Discussion Paper Series

Reforming Brazil's Cadastro Único to Improve the Targeting of the Bolsa Família Program

Bénédicte de la Brière
Kathy Lindert

June 2005

Social Protection Unit
Human Development Network
The World Bank

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Social Safety Net Primer Series

Reforming Brazil's Cadastro Único to Improve the Targeting of the Bolsa Família Program

Bénédicte de la Brière (DFID) and
Kathy Lindert (The World Bank)

June 2005*

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*This study was completed in October 2003.

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Preface

This case study is part of six Country Case Study Reports that were commissioned in 2003 by the World Bank specifically for the purposes of a summary report on the design and implementation of household targeting systems in the following countries: Chile, Colombia, Costa Rica, Mexico, Brazil and the United States. Research findings and earlier drafts of the report were presented at numerous workshops and seminars (two in Brazil in November 2003; two at the World Bank in Washington in November 2003 and January 2005; and one at the Second International Workshop of Conditional Cash Transfers in Sao Paulo in April 2004). The final version of the report as well as the other country case studies have been published as Social Protection Discussion Paper No. 0526 to 0532 and can be found at www.worldbank.org/safetynets.

Abstract

While targeting can effectively channel resources to the poor, implementation details matter tremendously to distributive outcomes. Several key factors affect performance, including: data collection processes; information management; household assessment mechanisms; institutional arrangements; and monitoring and oversight mechanisms. This report conducts an in-depth assessment of key design and implementation factors and their potential impact on outcomes for the household targeting system Cadastro Único used in Brazil to target social programs to the poor and vulnerable.

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Reforming Brazil's Cadastro Único to Improve the Targeting of the Bolsa Família Program

Bénédicte de la Brière (DFID) and Kathy Lindert (The World Bank)

Summary

This note was prepared at the request of officials from the Ministry of Social Assistance. It seeks to examine Brazil's main existing beneficiary registry and selection mechanism, the Cadastro Único, and to make recommendations that could help improve the targeting of social transfers to the poor. The introduction of the new Bolsa Família program offers a historical opportunity to reduce poverty and inequality in Brazil. A key ingredient into the success of this effort is the ability of the program to effectively channel resources to the poor. As such, the introduction of the new program also provides an opportunity for the Government to revamp its cadastro into a more modern, cost effective and accurate targeting tool. Fixing the cadastro is needed to promote targeting and to ensure the effectiveness of the new Bolsa Família program.

The Existing Cadastro Único

In 2001,[1] the federal government of Brazil launched a major effort to construct a single beneficiary registry database to serve its many social assistance programs. Until that time, each program operated its own system for targeting beneficiaries (all via unverified means testing).[2] The creation of a unique database (the Cadastro Único, or Cadúnico) and social identification number (NIS) responded to the need to improve efficiency and coordination and reduce duplication of administrative costs across the numerous safety net programs.

The main screening mechanism used with the Cadastro Único is unverified household incomes (unverified means testing). Data collection and beneficiary registry are decentralized to the municipalities, but operation and maintenance of the database are centralized at the federal level, with oversight provided by the Ministry of Social Assistance (SEAS/SAPS), and system management and operation conducted by the Caixa Econômica Federal (CEF).[3]

There are several advantages to having a single national database for determining and monitoring eligibility for social transfer programs, including *inter alia*: (a) preventing or reducing duplication of benefits (e.g., people receiving benefits from more than one municipality or program); (b) reducing duplication of administrative costs across programs; and (c) monitoring time limits and graduation criteria. The Cadastro Único represents a major step forward in advancing these goals.

Nonetheless, several aspects of the Cadastro Único should be improved, including: (a) clarifying its objectives; (b) distortions due to the use of *a priori* registry quotas; (c) distortions due to the use of self-reported income for determining eligibility; (d) problems with the identification of households; (e) the static nature of the database; (f) the lack of a system for auditing and quality control; (g) a lack of data access by key potential users (programs, municipalities); and (h) software and implementation problems.

Recommendations

As discussed above, the introduction of the new Bolsa Família program offers an opportunity to revamp Brazil's family registry and eligibility determination system so as to improve the targeting of social transfers. International experience suggest that four features should be considered in developing an improved targeting system as an alternative to the existing system:

- **Universal and on-going access to the registry for a dynamic safety net.** With this principle, the new system should avoid the static nature of the quota-based survey system: any family that believes it should be eligible for benefits should be allowed to apply for them at any time (even if they are not guaranteed benefits, pending an eligibility assessment), not just during survey periods. The reformed system should also allow for on-going updates (demographic, locational) for those who do benefit.
- **Cost Efficiency.** Efforts should be made to minimize the cost of interviewing families, while ensuring the integrity of intake efforts. Although it is not possible to identify the poverty status of families *a priori* before interviews and data collection (and indeed, that was the problem with quota-based surveying under the current system), certain tools, such as self-selection mechanisms and geographic targeting, can help minimize the cost of interviewing large numbers of ineligible families.
- **Outreach to the poor.** Specific efforts should also be made to ensure that the poor know of their potential eligibility for the program and can access the application and interview process.
- **Transparency.** Procedures for both (a) entry into the registry (interviewing, registering); and (b) entry into the Bolsa Família program (eligibility criteria applied to data collected) should be fully transparent and based on objective, consistent criteria.

Given these factors, we believe that improving the system for registering families and determining eligibility would result in considerable progress. Specifically we suggest the following reforms:

- The process for determining **entry into the new family registry** should adopt a combined geographic and individual assessment mechanism whereby families are interviewed and registered either as part of a demand-driven application system (most areas) or as part of a survey-outreach effort (some very poor areas), depending on the poverty characteristics of the area in which they reside (from a poverty map).
- Once families are interviewed and registered, **program eligibility** should be determined by applying proxy-means points scoring methodologies to the data collected. Program financing quotas should be used carefully and in a limited way.
- **A system of regular audits, cross-checks and quality control** is also recommended as part of a **performance-based management system** for the new family registry itself, and for the overall Bolsa Família program.
- **Institutional responsibilities** should also be clarified, both for levels of government and for specific agencies involved.

- Finally, efforts should be made to **invest in stronger implementation** arrangements and to **technically adjust** to key features of the new Bolsa Família program.

Since many of these reforms could take time, the report also suggests some transitional steps that could be taken to balance the need for moving fast to launch the Bolsa Família program, while taking the time needed to overhaul the family registry and eligibility process. The note is not intended to provide a blueprint for reforms or transitional measures, but rather to highlight key features and considerations that we believe should be part of the reform of Brazil's targeting system.

By improving its mechanisms for targeting, Brazil will strengthen the poverty impact of the Bolsa Família program. This will further advance Brazil's trademark as a world leader in social policy.

Main Design Features of the Cadastro Único

Target Population and Municipal Survey Quotas. The design of the Cadúnico aimed at registering all "poor" families[4] whose income per capita was less than half a minimum wage[5] so as to facilitate their receipt of federal social benefits (the target group of most social assistance programs in Brazil). Municipalities were given quotas for the total number of "poor" families to be registered in the database (whether or not the registered families later received benefits). These quotas were based on municipal-level poverty estimates deriving from the 1991 census (with some updating from the 2000 census). As discussed below, the use of *a priori* quotas for determining which families to survey and register is not recommended and should be reconsidered.

Questionnaire. The Cadúnico questionnaire is a 13-page document (plus one page of general instructions). Data collected include (a) identification numbers;[6] (b) household characteristics; (c) dwelling identification (address) and characteristics (tenure, type, total number of rooms, construction materials, water source and purification, type of lighting, sanitation, garbage collection); (d) incomes (see below); (d) expenses (rent, housing loans, food, water, electricity, transport, medicines, gas, and other expenditures); and (e) a variety of other information (land holdings, membership in social organizations, hired labor, and agricultural losses). No data are collected on assets other than housing and land.

Unverified Incomes as Targeting Instrument. Once data are collected, the various social programs use them to determine eligibility. Income is the only variable collected in the Cadúnico questionnaire that is actually used to determine eligibility for most social assistance benefits. The Cadúnico includes five income questions: earned income (from labor), retirement benefits, unemployment benefits, alimony, and other income. In addition, the Cadúnico collects information on gross agricultural income[7] (covering the last "agricultural year"), which is included in eligibility calculations. Income data are not verified by any form of documentation or cross-checking. For example, although the existing Cadúnico questionnaire would allow for it, self-reported incomes are not cross-checked against expenditure information or housing characteristics to check for inconsistencies. No instructions are given regarding: (a) which family members for which income data should be collected; (b) time reference periods (presumably quoted on a monthly basis by tradition in Brazil); (c) whether the income should be reported as average (monthly) or just the most recent unspecified time period (monthly); or (d) whether earned income should be reported as gross or net. As discussed below, the use of unverified, self-reported incomes for eligibility and means-testing is generally not accurate and should be reconsidered.

Uses. Numerous social safety net programs use the Cadastro Único to some extent in selecting their beneficiaries. The **Bolsa Escola Program (BE)**, a conditional cash transfer program to promote school attendance, uses it to some extent, though not fully since it had already developed its own system for selecting beneficiaries (SIBES) before the Cadúnico was constructed. As of March 2003, the BE program

made payments to about 4.6 million households (some from SIBES and some from Cadúnico). The **Bolsa Alimentação Program (BA)**, a conditional cash transfer program to promote health care and nutrition among young children and pregnant mothers, relies on the Cadúnico for selection of its beneficiaries. As of March 2003, 894,000 households benefited from the BA program.[8] The **Auxílio-Gas** (a gas subsidy) and the **Tarifa Social de Luz** (an electricity subsidy) also use the Cadúnico database, though their beneficiary base is wider and they can include other households upon the provision of supporting information. In practice, the regional utility companies report relying substantially on the Cadúnico for beneficiary selection. As of March 2003, 4.4 million households received the Auxílio Gas, or about 73% of total Cadúnico registrants. The **PETI** (child labor) and **Agente Jovem** programs also rely on the Cadúnico for beneficiary selection (but also supplement additional criteria for eligibility). Finally, the **Fome Zero Cartão Alimentação** program (which provides cash transfers to poor families provided they use the money for food purchases) has been using the Cadúnico as a first step for beneficiary selection. The Cadúnico lists are then "validated" or modified (and updated) by municipal councils, which have the final decision for determining eligibility. This has mostly led to excluding households which were included but do not meet the criteria. In most cases, the registration of "new" households in the Cadúnico has not happened for lack of capacity to register them.

Implementation of the Cadastro Único

The implementation of the Cadastro Único is jointly the responsibility of municipalities and the CEF. The process can be divided into three broad steps (a) data collection (decentralized, conducted by the municipalities); (b) data processing and database management (mainly conducted by the CEF in a centralized manner, building on information transferred from the municipalities); and (c) determining eligibility (federal and municipal program level) for the issuance of payments (centralized, see Box 1).

Step 1: Interviews and Household Registration in the Cadúnico

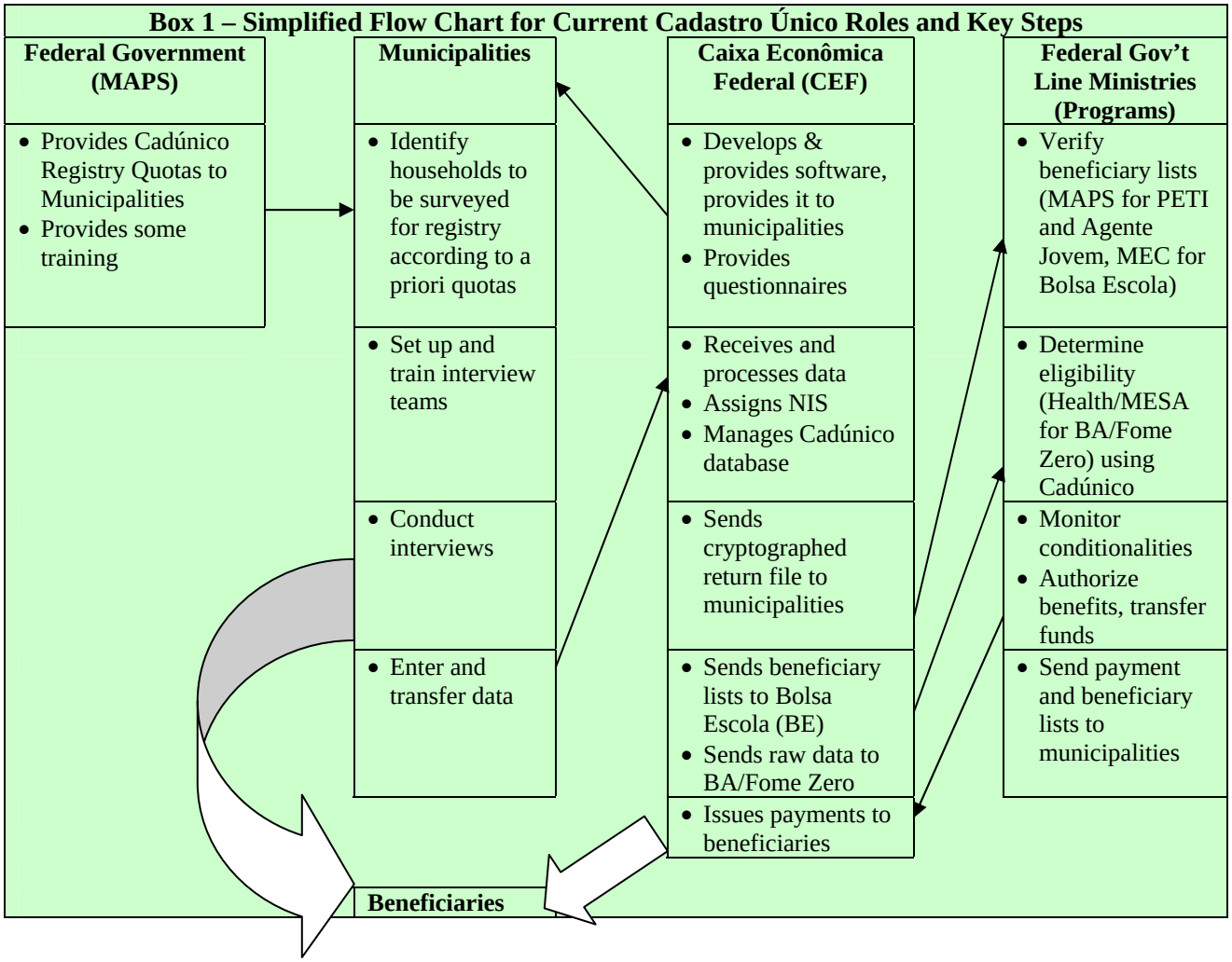
Municipalities are responsible for the actual household registry process. This process involves several steps: (1a) identifying which households to survey for the registry up to the pre-determined quota assigned to each municipality; (1b) setting up and training the interview team; (1c) conducting the interviews; and (1d) entering the data and transferring it to the CEF.

(1a) Identifying Households to be surveyed for the Registry. As discussed above, each municipality receives an estimate of the number of poor families estimated to reside in their jurisdiction. This estimate was derived from poverty analysis of (unverified) income data from the 1991 census, with some updating from information from the 2000 census. The municipalities then use these estimates as "quotas" or goals for registration in their jurisdictions, making an *a priori* qualitative judgment about whether or not the households are "poor" and should be included in their "quota" for registry in the database. Municipalities adopted their own methods for identifying *a priori* which households were "poor" enough to be registered in the Cadúnico. In practice, such methods differed substantially across the country and sometimes within municipalities, with little uniformity or transparency.[9] Some municipalities[10] registered only those households that were already receiving a benefit from a social program. Others excluded households who lacked formal documentation despite instructions that lack of documentation should not be a reason for exclusion.[11] A few surveyed the entire population.[12] In addition, two types of households appear costly to register and seem to have been disproportionately excluded from the Cadastro: (a) those living in remote rural areas (land reform settlements, *quilombolas*) or islands in sparsely populated large area municipalities, especially in the Northern region; and (b) those living in high-risk urban environments (*favelas*, squatter communities).[13]

(1b) Setting Up and Training Interview Teams. Municipalities are responsible for setting up the interview teams. In practice – and according to formal instructions – municipalities adopted a wide range of interviewers ("cadastradores"), including: municipal school teachers, community health workers, technical staff from the municipal secretariats for education, health and social assistance, coordinators and monitors for the Agente Jovem and PETI programs, partner NGOs, volunteers, university students, and trainees.[14] While some training was given,[15] in most cases, the training did not reach the actual interviewers, but included the social assistance secretary (very often, the municipal first lady) and sometimes the mayor, who were then supposed to "multiply" the training and extend it to interview teams. This resulted in very heterogeneous training and quality of interviews.[16]

(1c) Conducting the Interviews. While formal Cadúnico instructions recommended home interviews and visits, the actual location of interviews varied widely, depending on the size of the municipality, whether it is urban or rural, and whether it had its own social assistance policy and programs. In practice, labor constraints led municipalities to use a variety of strategies for conducting interviews.[17] Municipalities that did not undertake home visits generally used some kind of outreach method.[18] Instead of conducting new interviews, some municipalities that already had registries of their own tried transferring existing databases from local registries (e.g., São Paulo, Curitiba, Porto Alegre). As discussed below, this transfer was largely unsuccessful due to software and systems glitches.[19]

Box 1 – Simplified Flow Chart for Current Cadastro Único Roles and Key Steps



Step 2: Management of the Cadastro Único Database: Entering and Transferring Data

Municipal Data Entry and Transfers. The municipalities are responsible for entering the data[20] and transferring[21] it to local CEF offices on diskettes or through the internet. The Cadúnico system does not allow merging of databases so municipalities have to merge their database before transmitting it to the Caixa, a process that can last hours (and can be impossible for some large municipalities, who have had to re-enter their data).[22] Once the municipal files reach the CEF through one of the 15 servers, they are sent to the mainframe computer at the CEF. After the CEF processes the data and assigns social identity numbers (see below), the CEF generates a cryptographed return file ("arquivo-retorno"), which is sent to the municipalities for review. Municipalities, however, cannot modify these data or correct errors.[23]

Identity Numbers and Duplications. When the files are received, CEF assigns each person[24] a supposedly unique social identity number (NIS). However, the TCU audit revealed that close to 4,900 people (0.6%) of 864,101 audited registries[25] in the Cadúnico database had more than one NIS. Various factors cause these duplications: (a) input/typing errors in the field; (b) lack of coordination between municipal-level cadastro teams (possibly leading to, for example, two teams interviewing the same area twice), and (c) problems with the verification of identity. Multiple NIS numbers for individuals can lead to duplication of payments, since the Cadúnico system would treat each NIS as a separate beneficiary. In addition, the TCU audit found 458,751 cases (out of 17 million registries, or 2.7%) in which people with a single NIS were registered more than once. The analysis reveals that most of these (72%) were registered twice with different addresses, while the rest were registered twice with the same questionnaire.

Database Management. The CEF did not pre-test the software and database for the Cadastro, and problems with data entry, transmission, and management of the Cadastro Único database abound, including:[26]

- **Unjustified exclusion of households.** Software glitches have resulted in the exclusion of households without clear reason (with up to 20% of applications being rejected). In some cases, exclusion was linked to technical problems, such as: (a) data loss during batch transfers;[27] (b) rejection of typographical characters (earlier versions of the data entry system had rejected some characters such as ç); (c) rejection of certain CPF numbers or postal codes starting with "0" (São Paulo); (d) exclusion of some households from utility subsidies due to a lack of NIS numbers in CEF-generated return files, which prevented eligibility from utility subsidies[28]; and so forth.
- **Inflexibility to incorporate changes.** To date, the current version of the Cadúnico software does not accept changes or updates in household files, such as the inclusion of new household members, registry of deaths, etc. Indeed, the TCU audit revealed that deaths are not being taken out of the Cadastro Único.[29] The new version, 5.0, that is currently being introduced will apparently improve the ability of the Cadúnico to accept changes.
- **Inefficient file transfers.** Information on numerous households from large urban centers (e.g., 100,000 in São Paulo, 30,000 in Porto Alegre, etc.) was not included in the Cadastro Único due to problems with file transfers, [30] and had to be re-entered. The problems with merging and transferring files have still prevented Rio de Janeiro from including its information in the Cadastro, and Rio is now starting over in the collection of its Cadúnico data.

Data Access. Access to the Cadúnico database itself has been limited to the CEF and certain line ministries (e.g., Health for selection under the Bolsa Alimentação program). The Ministry of Social Assistance is supposed to have access, but hardware and software limitations have prevented this. Municipalities and States have not had access to the data once it is processed by CEF. Rather, municipalities only receive quantitative reports about the number of families in the system and the benefits they are receiving. The magnetic data they do receive in the return files is cryptographed, so

that it is impossible for them to match back the Cadúnico data with their original files or own-managed beneficiary databases. The states do not receive any information. The new version of the Cadúnico software apparently seeks to resolve the problems of municipal access to the data.

Step 3: Determining Eligibility and Issuing Payments

Each program has a different arrangement for using the Cadastro Único for determining eligibility. In some cases (e.g., Bolsa Escola), the CEF handles the whole process, running eligibility checks according to program criteria, and then informing the line ministry and municipalities about beneficiary lists. In other cases (e.g., Bolsa Alimentação, Cartão Alimentação), the CEF provides the raw database to the line ministry to process eligibility decisions. The line ministry then informs the CEF of the list of those eligible for payments. In either case, once the CEF has the beneficiary list, it processes payments, which are issued to beneficiaries as magnetic benefit transfer cards.

Magnitudes and Costs of the Cadastro Único

Magnitude. The Cadastro Único was implemented at amazing speed, beginning registration in mid-2002 and reaching coverage of some 30 million people (7.3 million families) by August 2003 (just over a year later). This compares with the initial national estimates of some 9-10 million poor families that should be registered. Coverage and registration varies greatly by state. With overall coverage of about 79% (families registered as a share of the total target population) as of August 2003, registration rates varied from only 2% in the Distrito Federal to 126% in Acre (some municipalities registered more than their assigned quota).

Costs. The costs of interviewing households for the Cadastro Único registry are estimated at US$28.5 million as of mid-2003 (excluding "systems" costs, such as software, hardware, etc.). While average unit costs clearly vary by area (according to population size, density, staffing, etc.), using these estimates, this implies an average cost of about US$3.9 per household registered. This is slightly more expensive than the decentralized proxy means system operated in Colombia, but less expensive on a unit cost basis than similar systems operated in other LAC countries (Table 1). As a share of total benefits transferred, the cost of the system represents about 1.6% of the total value of benefits transferred for various social programs using the Cadúnico (US$877 million).[31] This is more expensive per benefit transferred than systems in other LAC countries.

Table 1 – Comparisons of Interview Costs for Cadastros, LAC

	Average Unit Cost per Interview (US$)	Interview costs as % of Total Benefits Transferred
Chile	**8.4**	**1.3**
Colombia	2.3	0.5
Costa Rica	7.0	0.9
Mexico	5.6	0.7
Brazil	3.9	1.6

Source: Castañeda, Tarsicio, Kathy Lindert, and Luisa Fernandez (September 2003). Costs only include the local costs of interviewing (not systems costs).

Accuracy of the Cadastro Único and the Use of Unverified Incomes for Targeting

The problems with collecting data on incomes in household surveys are well known. Incomes tend to be underreported and incompletely measured, due to earnings in-kind or informal earnings. Incomes also fluctuate over a year due to seasonality and other shocks (particularly for those in the informal sector, the self-employed or those engaged in agriculture), such that monthly reference periods are unlikely to accurately represent a household's total income or welfare. These problems are illustrated in Table 2, which presents data from the Living Standards Measurement Survey (PPV) with the 1996 Household Income

Survey (PNAD, 1996). Data on income from the PPV, which come from a very thorough and detailed set of questions, are higher than those of consumption, as would be expected due to savings. Data on income from the more standard – and far less detailed – questions on income in the PNAD, however, are far lower than consumption, demonstrating the problems with underestimation of income in household surveys. For these reasons, data on consumption are generally believed to provide a more accurate picture of a household's welfare (more comprehensive, less likely to be under-reported, less variable).

Table 2 – Underestimation of Income in Household Surveys
Median monthly per capita income and consumption, 1996 Reals

	PPV Consumption	PPV Income	PNAD Income	PNAD income/ PPV consump.	PNAD income / PPV income
RM Fortaleza	133	180	76	0.57	0.42
RM Recife	119	136	80	0.67	0.59
RM Salvador	122	171	76	0.62	0.44
Other Urban NE	80	112	78	0.98	0.70
Rural NE	65	110	42	0.65	0.38
RM Belo Horizonte	173	286	135	0.78	0.47
RM Rio de Janeiro	216	302	169	0.78	0.56
RM Sao Paolo	234	357	225	0.96	0.63
Other Urban SE	191	265	197	1.03	0.74
Rural SE	101	171	126	1.25	0.74

Source: World Bank (analysis by Peter Lanjouw, 2003).

These standard measurement problems are compounded when income data is being collected for the known purpose of determining benefit eligibility. When households know that the answers they provide about their incomes will influence whether or not they would receive benefits, they have an added incentive to under-report their incomes.[32]

All of these problems are present in the collection of unverified income data for the Cadastro Único. **First**, the Cadúnico questionnaire does not include a very complete set of questions regarding income[33] leading to a likely underestimation of incomes. **Second**, reference periods for incomes in the Cadúnico are not specified (which itself can lead to significant error), but are assumed to be monthly (which suffer from the income fluctuation issues described above). **Third,** unlike with household surveys, with the Cadastro Único, households have the rational incentive to under-report income data provided since they know that the answers they provide will determine whether or not they are to receive benefits from a variety of social programs. **Fourth,** there are no verifications of the self-reported income data provided (which could have helped reduce simple measurement errors and adverse incentives for under-reporting). Data are not regularly cross-checked, either (a) within the Cadastro Único (e.g., checking reported incomes against reported expenditure data or housing quality variables, and then following up with re-interviews to reconcile inconsistencies); or (b) between the Cadastro Único and other databases (such as INSS, death databases, etc.). There is also no permanent system for regularly auditing the quality of the Cadastro Único (the TCU audit being conducted as a one-time quality audit). **Finally,** there are no penalties for fraud or abuse, and, as such, no real incentives against under-reporting of incomes.

At present, comprehensive and nationally-representative data on the distributional incidence of transfers targeted using the Cadastro Único are not available. The PNAD surveys do not collect detailed information on the main social assistance programs that rely on the Cadúnico to determine eligibility (e.g., Bolsa Escola, Cartão Alimentação, Bolsa Alimentação, Auxílio Gas, etc.). As such, there is no clear independent evaluation of the actual coverage or distribution of such benefits across the poor and non-poor (or quintiles) to determine errors of exclusion and inclusion, or gaps and duplications in coverage. A new household budget survey (the "POF") that was just completed, however, will provide the first opportunity to conduct such an analysis since its questionnaires did include specific questions about receipt of benefits from these programs.

Nonetheless, available evidence does suggest that the use of unverified incomes in the Cadastro Único is in accurate and should not be used for targeting cash transfers:

- **PNAD vs. Cadastros: The Adverse Effect of Incentives.** A comparison of the results from the PNAD survey and households included in the Cadastro Único and SIBES (the registry used by Bolsa Escola prior to the introduction of the Cadastro Único) reveals important differences in the number of poor households (Table 3). The PNAD survey likewise collects (self-reported) data on household incomes (with somewhat more detailed questions and without the adverse incentives for households to underreport income since no benefits are attached to the PNAD survey). Nonetheless, this comparison reveals over a million additional "poor" households included in the Cadastros (Cadúnico + SIBES) as compared with estimates from the PNAD. The tendency for households to underestimate incomes appears particularly strong among the "extreme poor:" almost twice as many extreme poor households (close to five million more) are identified by the Cadastros as compared with the PNAD. (Moreover, these results occur *before* the completion of registries for the Cadastro in various states).
- **INSS database vs. Cadastro Único.** The TCU audit linked the Cadúnico database to the benefits database of the National Social Security Institute (INSS) for Rio Grande do Norte using CPF data. The match showed that, out of 1,914 households, 652 reported lower incomes in the Cadúnico form than for INSS (34%), with a resulting inclusion of 228 non-eligible households (12% of the total included).

Table 3 – Tendency for Underreporting of Incomes in Cadastros that Use Unverified Incomes as Tool for Determining Eligibility for Social Programs

# "poor" households (mn) from:	Total # of Households (mn) with Reported HH income per capita of: Less than R$50 (Extreme Poor)	Between R$50-100 (Moderately Poor)	Less than R$100 (Poor)
From PNAD 2001	**5.1**	**6.3**	**11.4**
Total from Cadastros:	**9.7**	**2.9**	**12.6**
From Cadastro Único	6.7	2.3	9.0
• With BE or BA benefits	1.9	0.6	2.6
• Without BE or BA	4.8	1.7	6.4
From SIBES* (with BE)	3.1	0.5	3.6

*Source: de la Briere, Benedicte, Claudio Roquete, et. al. (August 2003). *SIBES is a registry similar to the Cadastro Único that was developed and put into use by the Bolsa Escola (BE) program before the introduction of the Cadúnico. It also uses unverified income as the main screening device for determining eligibility.*

The problems associated with the use of unverified incomes as a targeting mechanism compound the other errors arising from the design and implementation of the Cadastro Único (e.g., people with duplicate i.d. numbers and/or registries in the Cadastro, the inclusion of dead people, the exclusion of potentially eligible families due to the application of a priori quotas or data errors, etc.), as discussed above.

Main Issues and Recommendations

Advantages

Transfer programs like the new Bolsa Família program require some type of targeting mechanism to ensure that their resources go to the poor as intended. The rationale for targeting rests on the simple premise that the social returns for a given unit of transfer differ across members of society.[34] Rather than granting transfers to all individuals regardless of need, targeted programs concentrate limited public expenditures on those who need them most. Targeting cash transfers requires some mechanism for selecting specific beneficiaries (individuals or households). This usually involves collecting data on households (either incomes or "proxy" characteristics that are associated with poverty) and then determining eligibility by comparing these data to certain eligibility thresholds.

There are several advantages to having a single national database for determining and monitoring eligibility for social transfer programs, including *inter alia*: (a) preventing or reducing duplication of benefits (e.g., people receiving benefits from more than one municipality or program); (b) reducing duplication of administrative costs across programs; and (c) monitoring time limits and graduation criteria. The Cadastro Único represents a major step forward in advancing these goals.

The Cadastro Único experience also adopts several positive features. Broadly speaking, the reliance on (a) municipalities to collect and enter the data (implementation); and (b) a central body to manage the database and a single software, seems appropriate given the size and governmental structure of the country. The attempt to generate a single identification number is also commendable. In addition, the collection of a broader set of welfare measures (e.g., expenditure data, housing information in addition to welfare) could provide useful tools for cross-checking income measures (though these were not used). Finally, the sheer speed in which the database was launched and implemented is indeed impressive.

Issues

Nonetheless, there are several aspects of the Cadastro that should be improved, including:

- **A Need to Clarify Objectives.** The current design of the Cadúnico neither serves the objectives of (a) creating a single beneficiary registry, since many households benefit from programs but are not in the Cadúnico (e.g., those in SIBES for Bolsa Escola); or (b) operating as a targeting tool for determining eligibility (due to the imposition of a priori registration quotas, which, as discussed below, should be abandoned). The first order of discussion should be to clarify what it is that such a cadastro should do. Ideally, the government would possess an effective instrument for targeting and determining eligibility for benefits of existing programs or the new integrated Bolsa Família program. Two key design features should be reconsidered for the creation of an effective targeting tool: (a) the way in which households are interviewed and registered (entry into the registry); and (b) the process for determining eligibility using the data collected (entry into the program). These are each discussed below. The national database that would be constructed as a result of these interviews and data collection exercises could also serve as a beneficiary registry. This role, however would be a secondary, implicit objective that would come after eligibility determination is conducted (with some subset of households in the database that receive benefits after eligibility criteria have been applied).
- **Distortions Due to the Use of *A Priori* Registry Quotas.** An important design flaw for the Cadastro Único is the imposition of municipal level quotas for registering households. These quotas result in excluding potentially poor or including potentially non-poor households *before the appropriate information is collected or eligibility guidelines are applied*. Decisions about whether or not to register (interview) households are being taken without clear federal guidelines. Although the federal government provided guidelines about the headcount number of poor families to register, it did not provide guidelines about where and how to identify them. There are several possible problems with quota-based surveying and interviews: (a) lack of transparency regarding which households get interviewed; (b) opportunities for political manipulation (e.g., vote seeking by registering certain households with particular political affiliations rather than those without such affiliations); and (c) the potential for replicating existing inequalities at the local level (e.g., where the extreme poor get excluded because they are less informed or less connected to be included in the quota of registrants). For these reasons, the use of these a priori registration quotas should be abandoned, as discussed below.
- **Use of Self-Reported Income for Determining Eligibility.** As discussed above, the use of unverified incomes for targeting is generally problematic due to measurement errors and incentives for under-reporting and manipulation.[35] The experience with Brazil's Cadastro Único

is no exception. The income questions were poorly defined (reference periods, coverage of types of income), and, without any form of verification, there is simply too much room for error and under-reporting to rely on these data. Available evidence is discussed above. Alternatives are discussed below.

- **Static Database.** The Cadúnico is a static database. It does not allow households who become poor after their municipality has conducted surveys to enter the rolls. It does not allow for updating and changes of information on households that are included in the registry, e.g., for deaths, household composition changes, or changes in incomes (short of a complete re-surveying).
- **Lack of auditing and quality control.** At present, the Cadastro Único does not have a regular audit and quality control system to monitor its performance. The TCU audit was conducted as a one-time evaluation, and was not part of a broader system. Such a system is greatly needed.
- **Problems with Identification.** Numerous problems have arisen with the identification of individuals. First, some households were excluded due to lack of documentation to prove their identity. Second, inconsistent information on names was collected. Third, some households have duplicate NIS numbers or are registered more than once – which could lead to duplicate payments.
- **Lack of Data Access.** Another deficiency with the Cadastro Único is the lack of access to the database by municipalities and states.
- **Other software and implementation problems.** As discussed above, the Cadúnico's software has many weaknesses (households dropped in merging and transferring of files, inability to change records, various other errors). It also fails to include basic cross-checks (duplicate NIS, duplicate registration of households, cross-checking variables such as household expenses or housing quality against reported incomes, cross-checking against other databases, identifying registrants who have died, etc.) that would improve its accuracy. Other weaknesses with the Cadastro Único include: inadequate training and staffing of local interview teams, illogical questionnaire structure (mixing family-level and individual-level questions), and imprecise questionnaire definition (e.g., reference periods and other needed instructions).

Recommendations

The launching of the integrated Bolsa Família program provides Brazil with a historic opportunity to reduce poverty and inequality. These objectives depend crucially upon an effective mechanism for channeling benefits to the poor. As such, the new program also provides an opportunity for the Government to revamp the Cadastro Único into a more modern, cost-effective, and accurate targeting tool. Fixing the cadastro is needed to promote better targeting and to ensure the effectiveness of the Bolsa Família program.

While this note is not intended to provide a detailed blueprint for reforms, it provides a general road map to key recommendations that should be considered in re-thinking the design and implementation of an improved Cadastro Único (or some replacement for it). The main recommendations adopt a longer-term vision, recommending the type of system that we recommend Brazil move towards for the future. Since the development of such a system will likely take time, we also include some recommendations about managing the transition in a subsequent section of the paper. The specific details regarding reforms for both the immediate and the long-run should build on consultations with different types of municipalities (large urban centers, small rural villages), program managers at local and central levels, CEF agencies, etc. so as to build on their experience with the Cadúnico as well as that of other (central or local) registries.

International experience suggests that four features should be considered in developing an improved targeting system as an alternative to the existing quota-based survey system:

- **Universal and on-going access to the registry for a dynamic safety net.** With this principle, the new system should avoid the static nature of the existing quota-based survey system: any family that believes it should be eligible for benefits should be allowed to apply for them at any time (even if they are not guaranteed to benefit, pending an eligibility assessment), not just during certain infrequent survey periods. The reformed system should also allow for on-going updates (demographic, locational) for those who do benefit.
- **Cost Efficiency.** Efforts should be made to minimize the cost of interviewing families, while ensuring the integrity of intake efforts. Although it is not possible to identify the poverty status of families *a priori* before interviews and data collection (and indeed, that was the problem with quota-based surveying under the current system), certain tools, such as self-selection mechanisms and geographic targeting, can help minimize the cost of interviewing large numbers of ineligible families.
- **Outreach to the poor.** Specific efforts should also be made to ensure that the poor know of their potential eligibility for the program and can access the application and interview process.
- **Transparency.** Procedures for both (a) entry into the registry (interviewing, registering); and (b) entry into the Bolsa Família program (eligibility criteria applied to data collected) should be fully transparent and based on objective, consistent criteria.

Given these factors, we believe that improving the system for registering families and determining eligibility would result in considerable progress. With respect to entry into the new family registry, we recommend a combined geographic and individual assessment mechanism in which families are interviewed and registered either as part of a demand-driven application system (most areas) or as part of a survey-outreach effort (some very poor areas), depending on the poverty characteristics of the areas in which they reside (from a poverty map). Once families are registered into the Family Registry, we then recommend that program eligibility be determined by applying proxy-means points scoring methodologies to the data collected. We also recommend only limited and careful use of program financing quotas. A system of regular audits, cross-checks and quality control is also recommended as part of a performance-based management approach to the new family registry itself and to the overall Bolsa Família program. Institutional responsibilities should also be clarified. Finally, efforts should be made to invest in stronger implementation arrangements and technically adjust to key features of the new Bolsa Família program. Each of these recommendations is discussed in further detail below, followed by a brief discussion of key transition issues.

(1) Entry into the Family Registry

In light of the four key features discussed above – universal and on-going access, cost efficiency, outreach to the poor, and transparency – we recommend that the process for interviewing and registering families for subsequent eligibility consideration be conducted in two steps: (a) using a detailed and disaggregated poverty map to help target the program geographically; and (b) developing an on-demand application process as the main instrument for registering families, but combined with a survey-based approach in a few exceptional cases.

Geographic Targeting with a Poverty Map. A detailed, disaggregated poverty map can be used to help determine the process by which families are registered. For example, in a high poverty density area (e.g., highly-poor urban area with poverty rates greater than 70-80%), registering all families makes sense since most would ultimately be eligible for program benefits (virtually universal eligibility within that geographic micro-area). In contrast, in areas with lower poverty rates, the use of an on-demand application process makes more sense. In these areas, many families would not be ultimately eligible for program benefits, and as such would be more likely to self-select out of the registry if they know they have to stand in line with much poorer individuals and bear the indirect costs of the application process (i.e., their time). As

such, a detailed and disaggregated poverty map can help provide guidelines as to which areas should adopt which type of family registry process.

The first step in redesigning Brazil's targeting mechanisms, therefore, would be the use or construction of a disaggregated poverty map. While some proxy-based poverty maps exist (e.g., maps of weighted human development indicators), IBGE and the World Bank are starting up work on the construction of a poverty map that combines data from the 2000 census and the 2003 household budget survey (POF).[36] This methodology for constructing poverty maps has many advantages, including statistical accuracy, a fairly detailed level of geographic disaggregation (municipal or lower), and the generation of detailed indicators of poverty (rates, severity, depth) and inequality that can be used in helping characterize areas for the purposes of targeting. The construction of this new poverty map is estimated to take between 3-8 months, depending on the readiness of the data, the availability of staff and facilities (including space and computers) for the work. Other proxy poverty maps (using proxies from the census or the atlas of human development indicators) could be used in the interim if needed.

Registry and Interviewing of Families. The second step in redesigning Brazil's targeting mechanisms would be to interview and register specific families into the revised Family Registry. Two approaches are generally used for this: (a) an on-demand application method, whereby families come apply for inclusion in the registry; and (b) a survey-outreach method, whereby all families in a particular area are registered. Based on international experience, there are advantages and disadvantages of each method, and situations in which each are more suitable (Table 4). In light of these, we recommend a mixed approach, building on a geographic categorization of areas based on the poverty map (Table 5):

- **On-Demand Application Process as the Principle.** In most areas (as determined by the poverty map), we recommend the use of a demand-driven application process for both the immediate term and the long run (Table 5). With this approach, families would come to local welfare offices to apply for inclusion in the registry (and consideration for benefits). Initial interviews would collect basic information (residence, household composition, some basic proxy welfare indicators, see below). Follow-up home visits would verify this information (within a maximum period of time, say 30 days, to ensure efficiency of performance). These home visits could be unannounced so as to discourage manipulation (e.g., hiding of assets, as discussed below). To help spread out the possible bunching of initial applications and ease staffing constraints, registration "seasons" or waves could be announced (e.g., alphabetically). With this approach, families that are unlikely to be eligible for program benefits (e.g., the non-poor) would be more likely to self-select out of the registry to avoid having to line up with those poorer than themselves or bearing the indirect time costs of registering. Even with the on-demand approach, we recommend that Brazil adopt measures to actively promote applications by the poor (see Table 5).
- **Survey-Outreach Method in Very Poor Areas.** With pure geographic targeting, all families in very poor micro-areas would be eligible for a benefit (e.g., extreme poverty rates > 70%) because the administrative cost of identifying and excluding the few non-poor families would outweigh the benefits from doing so (savings on transfer leakages). However, the operation of cash transfer programs requires the registration of families even in extremely poor micro-areas, where virtually all households would presumably be eligible. At a very minimum, families must be registered and residence and identity verified. Registration information is needed to later process and issue payments, and verifications are needed to prevent against fraud, false addresses, ghost beneficiaries, and/or people coming from other areas to claim benefits. As such, even in very poor areas, we recommend at least an initial surveying-outreach approach, whereby all families in those micro-areas are registered, with verifications performed on residence and identity (Table 5). Since verification of residence and identity (usually about 10 questions) would generally require a home visit,[37] and since the marginal cost of gathering

additional basic proxy welfare information (usually about 10 questions) is relatively small once a home visit is already being conducted, this outreach-surveying would involve basic registration, verification of identity and residence, and the collection of basic proxy welfare indicators (see below). In some areas – such as high density poor areas – such outreach-surveying might only be needed in an initial stage (to reduce the unit costs of registering large numbers of neighboring families). After that initial sweep, these areas would revert to the development of a permanent on-demand application process, perhaps using satellite or mobile welfare offices located in these very poor micro-areas (Table 5). In other areas – such as highly poor remote rural areas – outreach surveying may be needed on a repeated basis due to the dispersed location of poor families and the higher likelihood that they would be uninformed or unable to travel the needed distances to apply.

Table 4 - Advantages and Disadvantages of Outreach and Application Registry Methods

The Survey-Outreach Method: Survey of Poor Areas	On-Demand Application Method
Advantages	***Advantages***
• Better chances of reaching the poorest of poor who can be uninformed about programs and or have no money for transport, other, to apply for programs; • Marginal unit costs of registry are lower (since a census-like operation that covers neighboring families can save in transport and other costs) • Can contribute to better data quality control and reduce manipulation of data	• Self-selection of non-poor families out of registry (declining to apply) may result in lower total costs due to lower number of families interviewed • Dynamic (not static) database that is easier (cheaper) to manage and update and that allows on-going access to registry (more flexible as a safety net tool) • More transparent and open: anyone has the right to be interviewed upon application. • Permanent process helps build and maintain institutional structures and capacities (rather than infrequent use of survey teams) • Increasing institutional capacity can eventually allow for use of "one-stop shops" whereby in-take specialists can also refer applicants to other social services
Disadvantages	***Disadvantages***
• Total cost of registry many be higher, especially if survey covers many non-eligible non-poor families • Static database that is difficult to update, manage and that can deny on-going (permanent) access to registry (between survey updates) • Quota-based (rather than exhaustive) surveying results in non-transparent decisions being made about which families get registered before data are collected	• Those that apply may not be the poorest (may live closer to urban areas, be more informed, have higher education and or have money for transport costs, etc.); • May exclude the poorest of the poor who are less informed or face higher transport costs • Per unit costs are higher (repeated travel costs of making separate and repeated home visits in specific neighborhoods as families apply), there are problems with locating addresses of poor.
Best suited when:	***Best suited when:***
• Poverty levels are high (over 70%), poverty areas are homogeneous (rural areas, urban slums), low average education levels • There is a need to start a large program quickly and government needs to be pro-active in reaching poorest.	• Poverty levels are moderate or low, and areas are heterogeneous; • People have higher education levels and outreach campaigns to encourage program participation can be implemented.
Examples of Use:	***Examples of Use:***
• Colombia's SISBEN (exhaustive census-surveying of pre-identified poor areas) • Brazil's Cadastro Único (quota-based surveying) • Chile's Ficha CAS until the early 1990s • Mexico (Progresa Program) in poor, rural areas • Costa Rica (surveying of poor areas)	• The United States • Chile's Ficha CAS since the early 1990s • Mexico (Progresa Program) in urban areas • Costa Rica (also available on demand) • Colombia (also available on demand)
Source: Castañeda, Tarsicio, Kathy Lindert and Luisa Fernandez (2003, forthcoming).	

Table 5 – Combining Geographic Targeting and Individual Assessment Mechanisms for Family Registry (Intake)

Geographic Targeting Category (from disaggregated poverty map)	Implications and Factors to Consider	Application and Registry Process		Promotion and Outreach Methods
		INITIAL START-UP	PERMANENT	
Heterogeneous areas: • Medium- or lower-poverty rates (<70%); • High inequality (Most areas)	• Many families will not be poor • Need to avoid costs of interviewing large numbers of non-poor • Need to make program available to those that are poor	**INITIAL AND PERMANENT:** **Demand-driven application process:** candidates must come in to local welfare offices to apply; unannounced home visits follow initial interview (to verify residence, identity, welfare indicators). Regular (annual?) re-certification by those that receive benefits required.		• Public information campaign • Access via main local welfare office (self-selection for applications)
Areas with very high poverty density: • High poverty rate (>70-80%), *and* • Large number of poor people per km (e.g., high poverty urban areas)	• Most families will be poor • Still need to register them and verify residence, identity • Large concentration (density) of poor people reduces unit costs of interviewing and registering	**Initial survey-outreach sweep**, registering all families within that geographic area into database. Could rely on existing Cadastro if completed, but may need updating. If do use existing Cadastro temporarily, could also allow those who were not included to go to local welfare offices to apply.	**Permanent demand-driven application process:** Candidates must come to local welfare offices to fill out basic application form and conduct initial interview (basic registry information). Home visit would follow to verify residence, household composition, and welfare indicators (marginal cost of latter is small once home visit already being conducted) Regular (annual?) re-certification by those that receive benefits required.	• Public information campaign • Initial survey sweep • Satellite or mobile registry offices located in these areas • Candidates could also go to the main local welfare office
Areas with high but dispersed poverty: • high poverty rate (>70-80%), *but* • low density (e.g., very poor remote, rural areas)	• Most families will be poor • Still need to register them and verify residence, identity • Dispersion of poor families (and likely remote locations) raises unit costs of interviewing and registering	**Initial survey-outreach sweep**, registering all families within that geographic area into database. Could rely on existing Cadastro if completed, but may need updating. If do use existing Cadastro temporarily, could also allow those who were not included to go to local welfare offices to apply.	**Permanent process of repeated survey sweeps** using mobile unit and institutionalized teams due to high unit costs of each separate interview (economies of scale with survey sweep approach) Potentially eligible families can also come to nearest welfare office to apply at any time to guarantee open access between sweeps	• Public information campaign • Initial survey sweep • Repeated survey sweeps with mobile units and institutionalized teams • Candidates could also go to the nearest main local welfare office

(2) Using Proxy Means Indicators to Determine Program Eligibility

As discussed above, the use of unverified incomes for targeting is generally problematic due to measurement errors and incentives for under-reporting and manipulation, both internationally and in Brazil.[38] If incomes cannot be verified in a cost-efficient manner (as is likely to be the case in Brazil, with its high degree of informality and in-kind earnings), then Brazil should instead use proxy means variables as a tool for targeting social programs to the poor.

Proxy-means tests use a relatively small number of household characteristics to calculate a score that indicates how well off the family is (providing an estimate of its "probability of being poor"). These characteristics should ideally be easily observed, but not easily manipulated by families, and they should generally be correlated with overall welfare. Typical variables used in other countries include: geographic location, housing quality, ownership of durables, education of adults, availability of public infrastructure services, and employment. Some countries also use self-reported income along with these other variables (so that the other variables provide a sort of "cross-check" to help with the consistency of reporting). Locality-level poverty rates can also be used as one of the "proxies," reflecting the probability that the family is poor due to its location in a particular micro-area.[39]

The proxy-means variables are then weighted using statistical techniques to generate an overall points score.[40] Those families with scores below certain thresholds are then eligible for benefits. Proxy means tests are generally better at accurately identifying those living in long-term, chronic poverty than those whose situations have recently worsened due to shocks (transient poor).

Proxy means testing is currently being used in a number of countries with relatively strong results.[41] For example, under Chile's Subsidio Único Famíliar (SUF), a cash transfer targeted to poor families using Chile's Ficha CAS (proxy means testing system), close to 90% of total benefits transferred are received by those in the poorest 40% of the population (and two thirds go to the bottom quintile). With Colombia's scholarship program, which is targeted using its proxy means testing system (SISBEN), close to three quarters of all benefits go to those in the poorest 40% of the population. Moreover, proxy means testing is generally not expensive (see Table 1 above), averaging about US$5.9 per interview in Chile, Colombia, Costa Rica and Mexico.

In switching to a proxy-means based system, policymakers should carefully consider which variables should be included (based on poverty analysis of household surveys), avoiding the inclusion of unnecessary information (which is costly to collect). Moreover, policymakers should adopt measures to reduce the risk of manipulation, such as by re-weighting the points scoring formula from time to time, or using unannounced home visits (so that households couldn't try to hide their assets in advance).

Since most variables used for proxy means testing change more slowly than incomes (measuring primarily chronic, not transient, poverty) updating and re-certification of beneficiaries can be less frequent than with incomes (say every two years). Decisions should also be taken about lifetime time limits or graduation periods to be applied to the Bolsa Família program.

(3) Careful Application of Quotas for Program Eligibility – Only If Needed

Ideally, the Bolsa Família (or other social assistance programs) would be available to anyone at any time provided that they are poor (meet proxy-means eligibility criteria as applied to data collected in the revised Family Registry) and comply with the required conditionalities (for health and education). This open safety net would imply that anyone could *apply* at any time (not a static database) – but also that the budget be open and counter-cyclical (to allow for changing numbers of beneficiaries). Often, fiscal limitations constrain such flexibility in the safety net and force policymakers to impose quotas on the total number of

families eligible for benefits. Quotas for *program* eligibility are not the same as quotas for *interviewing and registering* families (which should not be used, as discussed above). If needed, quotas for program eligibility should be carefully implemented. Again, the poverty map can be a useful tool, determining the amount of financial allocations (quotas) assigned to each municipality for the transfer program according to transparent poverty-based criteria. Within municipalities, officials should adopt transparent criteria for determining which of the potentially eligible families would benefit. Preference should be given to the extreme poor before the moderate poor. After that, other criteria – such as presence of young children, recent death in a family, or evidence of other shocks – could be used to prioritize families. If no such criteria are feasibly available, at the very least a fair, random, and transparently publicized "lottery" system could be used to allocate available program slots among (surveyed and registered) eligible families in the (revised) cadastro. For example, the computer could select every X number of families to be eligible (and this transparent criteria is published so as to be understood by the public). This would avoid the application of other – non-transparent (political) – criteria from entering the decision process.

(4) Developing a System of Regular Audits, Cross-Checks, Quality Control

An improved targeting system should also include clear guidelines for regular independent audits, cross-checks and quality control. **First**, regular random audits should review application procedures and database management for a random sample of families (up to 20% resurvey). This is critical to ensuring objective and transparent treatment of all citizens by reducing opportunities for manipulation and favoritism in the selection of beneficiaries. Clear procedures should be established (and published) for punishing fraud. **Second,** the improved system should also build in regular cross-checks to avoid some of the errors that have plagued the existing Cadastro, such as duplication of beneficiaries (NIS and multiple entries), "ghost beneficiaries" (missing or dead beneficiaries), or "lost candidates" whose data get lost during file transfers. **Finally**, independent quality control is also needed to measure how well the beneficiary selection mechanism (improved Cadastro Único) is actually working in terms of avoiding errors of exclusion of the poor and inclusion of the non-poor. This can be done by including questions about receipt of programs that use the Cadastro Único – especially the new Bolsa Família program – in regular nationally, representative surveys (such as the PNAD, the PME and the POF surveys). This information would provide regular feedback about the actual targeting outcomes of these programs – and the accuracy of the targeting instrument. Such surveys and random sampling could also be done at a sub-national level, to provide feedback to specific states (and possibly municipalities) about the accuracy of the application of the targeting instrument within their jurisdictions.

(5) Performance-Based Management and Targeting Outcomes

A few key indicators should be used to track the performance of the Cadastro Único, and the programs (such as Bolsa Família) that use it. These include: (a) indicators of targeting outcomes (coverage of the poor, program incidence, errors of inclusion and exclusion); and (b) poverty reduction. As discussed above, these performance and quality control indicators could be tracked using household surveys and random sample audits, conducted by an independent body. To provide incentives for accurate application of targeting instruments, these results could be published openly. Further incentives could be built in to the system by providing small but symbolic financial rewards to municipalities (or states) that are revealed (by independent surveys) to generate strong targeting outcomes. Some key interim process indicators could also be tracked as a monitoring function, such as municipalities' performance on outreach, updating, etc.

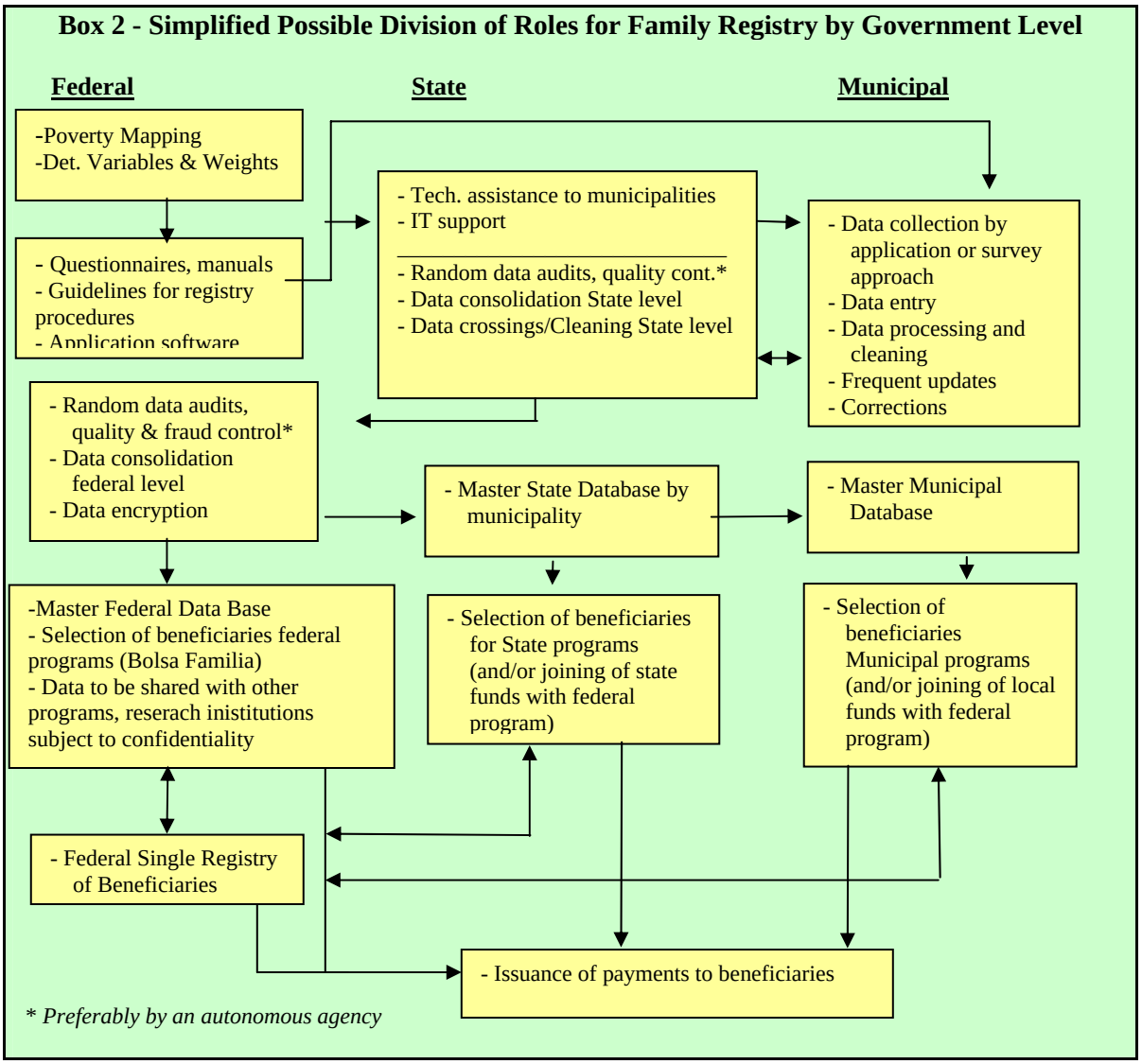
(6) Clarify Definition of Institutional Responsibilities

There is a need to define clear responsibilities of the different agencies involved including identifying: (a) who is responsible for building and operating the system and updating it; (b) how often updates will be required; (c) who supervises application and updates; (d) who provides financing for application and updates; (e) how often and how the database will be supplied to program agencies,

municipalities, and other users; (f) how and through what channels program agencies can provide feedback to system administrators. Adequate financing should also be provided for the redesign and implementation of an improved Cadastro, both at the central level and at the municipal level (preferably financed with federal funds).

Broadly speaking, the use of municipalities for implementation and data collection, states for consolidating information (could be optional), and a central agency for database management and central guidelines seems appropriate. One possible general configuration of roles for the family registry by level of agency (central, state/region, or local/municipal) is included in Box 2. (Note that these outline possible roles for the family registry, not for the entire Bolsa Familia program or the monitoring of conditionalities, which should be the responsibility of the line ministries).

Box 2 - Simplified Possible Division of Roles for Family Registry by Government Level



However, the specific agencies, and their roles, should be reviewed and clarified. For example, it may be decided that the CEF's role should focus primarily on issuance of NIS numbers and payments, with another central agency be responsible for managing the database. Applying eligibility criteria and managing beneficiary lists should be the responsibility of program managers in the new Executive Secretariat and monitoring of conditionalities should be the responsibility of the line ministries, provided that this information get fed back to a central body overseeing the issuance of payments.

(7) Invest in Stronger Implementation

Investments should also be made in strengthening implementation, including: (a) improving the assigning and cross-checking of identity numbers (NIS); (b) investing in the training of municipality officials and interviewers; (c) designing an overall information strategy with appropriate systems to match; (d) improving and pre-testing software; (e) exploring the possibility of better in-field data entry and cross-checking systems (to cross-check consistency of information, identify missing information in the field where verifications and re-visits can then be conducted); and (f) improve coordination between government agencies at the municipal and federal level.

(8) Consider Other Technical Adjustments for the New Bolsa Família Program

Some other technical factors should be considered when re-designing the registry and eligibility tools for the new Bolsa Família program. **First**, under the Bolsa Família program, the family rather than the individual, constitutes the assistance unit. An information system that clearly links family members (for eligibility and monitoring of conditionalities) to each other – and can check that each member is unique to each family (no double counting of individuals in multiple families) is needed. **Second,** if time limits are imposed, the information system would also have to be able to track the time each family (or beneficiary?) benefits from the program so that they can be imposed. **Third,** information systems should be designed to link the monitoring of conditionalities (by line ministries) to on-going eligibility and issuance of payments.

Transitional Considerations: A Phased Approach

Obviously, an overhaul of the Cadastro Único to remedy the issues highlighted above and implement the needed recommendations will take time. A phased approach to introducing the new Bolsa Família program – which depends critically on a solid beneficiary selection process – is thus warranted. To meet the needs of both moving fast to integrate the social programs, and taking the time to overhaul the family registry and eligibility process, the Government could consider a phased approach:

First, it could launch an initial phase using data from the existing Cadastro Único and other beneficiary registries (e.g., SIBES for Bolsa Escola). These data could be used as they are, whereby all those currently benefiting from the various programs will be shifted to the new payments and conditionality scheme under Bolsa Família. This would simply require merging information from the existing Cadastro Único and other beneficiary registries (e.g., SIBES) and changing the benefits scheme. Alternatively, the Bolsa Família program could seek to modify eligibility criteria to get away from the problematic reliance on unverified incomes as the main screening factor. For example, it could use a (temporary) weighting of incomes and those proxy variables that were collected in the existing Cadastro Único to refocus the program, giving priority to targeting the extreme poor (according to these variables).

This could be followed by a **second** phase in which the pre-tested, new and improved family registry and eligibility system is ready. In this second phase, all potential beneficiaries would have to reapply (or be re-surveyed depending on the area) under this new registry system in order to ensure proper transparency, improved targeting and updating of information. This new system could be rolled out by municipality. One way to prioritize municipalities to implement the new system would be to start with those with higher capacity for adopting such a scheme. Another way would be to start with those municipalities in which the current Cadastro Único was not yet implemented (or implemented incompletely) so as to fill in those priority data gaps.

These transitional and phasing plans should be announced at the outset with a clear **communications scheme**, so that the public knows of improvements to come – and the need to reapply in phase two. With the elimination of interview/registry quotas (see above), a communications campaign should make clear that registration in the new revised cadastro does not guarantee access to benefits.

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[1] The Cadastro Unico (Cadúnico) was established in July 2001 through a ministerial decree (MPAS Decree 3877). The contract with the Caixa Econômica Federal (CEF) for the administration of the database and issuance of payments to beneficiaries was signed on December 28, 2001. Municipalities began registration for the Cadúnico in mid-2002.

[2] For example, the Federal Bolsa Escola Program had created its own beneficiary registry system, "SIBES" (the *Sistema de Informação do Bolsa Escola*) and the Bolsa Alimentação program was using a health system registry (DATASUS).

[3] CEF is a federal savings/credit union organization. Apart from banking services, CEF has traditionally provided payments issuance services for federal assistance programs. CEF operates its open 2,047 agencies nationwide, and is linked with 8,900 lottery points and 2,000 banking correspondents. This broad network is supposed to guarantee its presence in all Brazilian municipalities, one of the reasons for its central role in managing the Cadastro Unico database and payments issuance for social programs.

[4] The definition of a "family" is provided in the National Social Assistance Policy and the Cadúnico information leaflet as "what defines a family nucleus is shared income, that is people who live with a common income. Even if they are not related, they are registered as a unique family." This definition, however, is not included in the interviewer manual provided by the CEF.

[5] The monthly minimum wage has been at R$240 (approximately US$80) since January 2003. It was R$180 in 2001 and R$200 in 2002 (except in Rio de Janeiro where it was already R$240).

[6] Brazil has experienced a proliferation of identification numbers, with individuals possessing many ID numbers (or sometimes none), including the social identity number (NIS, PIS), information and number from the formal ID card (*carterinha*), labor card number, social security number (INSS), tax registration number (CPF), voter registration, etc. As such, the Cadúnico questionnaire collects as many ID numbers as possible. In theory, this would allow database managers to cross-check for potential duplicate registries for any of these numbers. Documentation is required for identification purposes (and, as discussed below, some applicants were denied registry due to a lack of documentation).

[7] Three types of gross agricultural income are collected: (a) gross income from chicken, fowl, milk production, goats, sheep, pigs, fruit farming, silkworms, and brick-making; (b) gross income from other cattle activities; and (c) gross income from non-cattle activities excluding rural pension benefits.

[8] The TCU audit report suggests a high proportion (34%) of benefits under the BA program are not actually taken up or received by intended beneficiaries. There are several reasons for this. **First**, many beneficiaries reportedly never received their magnetic transfer cards. In its early inception, the CEF sent the cards to municipal agents with the names of the beneficiaries, but not the addresses. Municipalities lacked capacity and information to locate beneficiary households and provide them with the cards, and beneficiaries only know of their eligibility in the program when they receive the cards. Due to the numerous problems in delivering the magnetic cards to the beneficiaries, the local CEF agency took on the responsibility for delivering the cards to the beneficiaries. (And the CEF is experimenting with sending the cards through the mail). **Second,** in some municipalities, the CEF network is insufficient (lack of an agency, reliance on correspondents, long lines, etc.). **Third,** some beneficiaries report difficulties in using a magnetic card with a password (many have had few previous dealings with the formal banking system). And **finally,** households are automatically excluded from benefits if they do not pick up their benefits twice in a row.

[9] De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.

[10] Some 15% of municipalities interviewed for the TCU audit reported that they thought they were only supposed to register families already receiving a social benefit.

[11] Based on the TCU audit, some 63% of municipalities interviewed by the TCU mentioned that they made inclusion into the Cadastro conditional upon obtaining proper identification. Some municipalities set up accelerated documentation procedures for the Cadúnico target population (mobile ID units). A simplified procedure was also negotiated with the Ministry of Justice for people who did not have any documents: with two witnesses, a person can give his/her name, both his/her parents' names and be given a temporary ID document.

[12] Of those municipalities interviewed for the TCU audit, under 8% reported registering the whole population.

[13] De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.

[14] Preliminary data from Maranhão suggest that community health agents seem to have been more accurate in registering families than teachers, perhaps because they routinely visit houses in their areas. De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.

[15] In terms of training, three formal channels were offered: (a) the Secretariat of Social Assistance (SEAS) produced a one-hour TV program that was shown on TV Escola in December 2001 and January 2002; (b) state CEF and SEAS representatives were responsible for organizing training in each state; and (c) SEAS conducted training in a number of municipalities.

[16] Training was considered insufficient in 26% of the municipalities interviewed by the TCU audit.

[17] For example: (a) home interviews conducted by small teams of municipal technical staff (community health agents, social assistants, teachers), often at the expense of their regular duties (teaching, medical care); (b) registration booths, manned by the teams (often by teams of university students in larger municipalities) were set up in markets, fairs, schools and the city hall; (c) interviews conducted by "Cadastro Unico working groups" (in some municipalities) at formal offices or health posts. De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.

[18] Some played messages on the radio or cars with speakers to announce registration booths. Others organized a "Day of the Cadastro," which they promoted with leaflets, messages in schools, local media, etc. Some used TV advertisements, and the Ministry of Social Assistance ran an advertisement campaign on TV Cultura for a week in March 2001. Some 14,000 information brochures and 30,000 leaflets were distributed.

[19] De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.

[20] Municipalities enter their data off-line using the "Entrada e Complementação de Dados" software. Version 4.8 as of May 2003.

[21] They use the software "Conectividade" (Version 5.1.0 as of May 2003) to transmit the database to the CEF through the use of a digital identification password.
[22] De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.
[23] De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico.
[24] The name of each family member is recorded in the Cadastro questionnaire. No detailed instructions are provided for the recording of names, which can be quite complex. Problems have been reported with the abbreviation of common names, for example leading to the assigning of duplicate NIS numbers for Cadúnico registry for the same person if registered as "Ma. Da Conceição" and "Maria Da Conceição."
[25] From Rio Grande do Norte sample.
[26] De la Briere, Benedicte, Claudio Roquete (MAPS), Solange Teixeira (MAPS), Elaine Paz (MAPS), and Leila Aquilino (MAPS) (August 2003). "Country Case Study: Brazil's Cadastro Unico; and Tribunal de Contas da Uniao (TCU) (April 2003). "Auditoria do Cadastro Único dos Programas Sociais do Governo Federal.
[27] For example, 245 households lost in the transfer of two data batches in São Jose dos Campos. Of the total 8,000 that were entered in March 2003, only 7755 (8,000-245) were maintained in the data transfer.
[28] In Pelotas, Rio Grande do Sul.
[29] The number is small – 30 people that also registered obituaries, of which 25 had died before the initiation of the Cadastro Unico (and hence were dead when registered). Nonetheless, the problem remains and cross-checks should be built into the process to avoid this.
[30] The software program ("Importação Cadastral" Version 2.0.2 as of May 2003) designed to import existing registries for municipalities that have them (e.g., São Paulo, Porto Alegre) has been inoperative since February 2003, though the latest version updates might correct this problem.
[31] This estimate assumes that the information (and hence the interview costs) is valid for two years.
[32] The use of simple means testing had more success in some transition economies in Eastern Europe (e.g., Èstonia, Hungary, Poland, Slovenia and Bulgaria). Coady, David, Margaret Grosh, and John Hoddinott (November 2002). "The Targeting of Transfers in Developing Countries: Review of Experience and Lessons." The World Bank. Social Safety Net Primer Series. Little is known, however, about the verification methods used. Nonetheless, these economies are likely quite different from those in developing countries, given the relatively higher levels of education of the population, lower shares of informal work, and smaller size of the countries.
[33] For example, limited ability to probe the value of informal or in-kind income, such as self-consumed agricultural production, transport, housing or food costs paid by employers, incomes from multiple jobs, etc.
[34] Alderman, Harold (1991). "Food Subsidies and the Poor." in *Essays on Poverty, Equity, and Growth.* G. Psacharopoulous ed. Oxford : Pergamon Press.
[35] The use of simple means testing had more success in some transition economies in Eastern Europe (e.g., Èstonia, Hungary, Poland, Slovenia and Bulgaria). Coady, David, Margaret Grosh, and John Hoddinott (November 2002). "The Targeting of Transfers in Developing Countries: Review of Experience and Lessons." The World Bank. Social Safety Net Primer Series. Little is known, however, about the verification methods used. Nonetheless, these economies are likely quite different from those in developing countries, given the relatively higher levels of education of the population, lower shares of informal work, and smaller size of the countries.
[36] These maps will be constructed using methodologies developed by the World Bank under the research guidance of Peter Lanjouw et. al. They have been applied in numerous countries, including: Ecuador, Panama, Guatemala, Nicaragua, South Africa, etc.
[37] While some very poor households could provide proof of residence via property title or electricity/water bills, most would not be able to (either they don't have property, electricity or water or the titles/bills are not in their name).
[38] The use of simple means testing had more success in some transition economies in Eastern Europe (e.g., Èstonia, Hungary, Poland, Slovenia and Bulgaria). Coady, David, Margaret Grosh, and John Hoddinott (November 2002). "The Targeting of Transfers in Developing Countries: Review of Experience and Lessons." The World Bank. Social Safety Net Primer Series. Little is known, however, about the verification methods used. Nonetheless, these economies are likely quite different from those in developing countries, given the relatively higher levels of education of the population, lower shares of informal work, and smaller size of the countries.
[39] See Elbers, Chris, Jean O. Lanjouw, and Peter Lanjouw (September 4, 2003). "Imputed Welfare Estimates in Regression Analysis." Draft.
[40] These weights and variables can be location-specific (e.g., for urban or rural areas), and can be adjusted over time to reflect changing conditions (e.g., as all households get access to water, this may be less relevant over time) and to help avoid manipulation (as households learn which variables count more and try to mask possession of those assets). See Castañeda, Tarsicio, Kathy Lindert and Luisa Fernandez (forthcoming 2003). "Implementing Targeted Programs Using Proxy-Means and Means-Testing Systems: International Evidence from Latin America and the United States." The World Bank.
[41] It is important to note that all targeting mechanisms involve some degree of leakage to the non-poor. While some leakage to the near poor could be considered desirable, the objective of targeting is to try to maximize the share of resources that reach the poorest of the poor.