Brazil's Single Registry Experience: a tool for pro-poor social policies.

Joana Mostafa*

Kátia Cristina da Silva**

September 2007

*Master in Economics by UNICAMP and current collaborator to the *Cadastro Único* Department at the Ministry of Social Development and Fight Against Hunger (MDS).
**Economics PHD student at UNB and current collaborator to the *Cadastro Único* Department at the Ministry of Social Development and Fight Against Hunger (MDS).
The authors take full responsibility for the opinions and suggestions stated in this paper, for which the usual caveats apply. The paper has very much improved with the revisions made by Fabio Veras Soares (IPC) and Ricardo Rodrigues Dutra (MDS), for which the authors are most grateful.

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1. Introduction

The challenge to reduce poverty and inequality in the developing world has been addressed from different perspectives and ideologies throughout the 20th century. In Brazil, most of the social policy structures to tackle these issues were last expanded and re-arranged through the 1988 Constitution. It was marked by the re-democratization process[1], by the failure of past economic and social policies to decrease inequality and by almost a decade of economic stagnation which greatly increased the demand for social services. In this setting, some of the innovations to come included the following[2]:

i. Decentralization of education, health and social assistance services, with municipal level implementation and co-funding from central, *meso* and local government.

ii. Increase of civil society participation through the edification of new institutional structures to accommodate new demands and suppliers of social services.

iii. Increase of non-contributory social policies, particularly of cash transfers to specific vulnerable sectors of society.

Up to the 1988 Constitution, the past experiences with non-contributory cash transfers had the 1971 rural pension (*Programa de Assistência ao Trabalhador Rural, Lei Complementar* n°11), which granted half a minimum salary per month to the household heads of subsistence farmers, against a modest cash contribution[3]; and the 1974 *Renda Mensal Vitalícia* (*Lei* n° 6.179), which also paid half a salary to the poor persons with disabilities (PWD) and inactive elderly. These experiences were radically expanded by the 1988 Constitution, being promoted to the status of constitutional right[4].

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[1] Brazil had 20 years of strict military government from 1964 to 1984. During this time, the nation's welfare system was much improved in that it established national, public and universal health, education and housing policies, with defined funding structures and onus between government, capital and labour contributions.

[2] DRAIBE, Sônia Miriam - *O Welfare State no Brasil: Características e Perspectivas*. NEPP Caderno de Pesquisa, n° 08. Campinas, 1993.

[3] Although strictly contributory, the reduced value and time of contribution (2% of the rural production or income), implied a co-funding structure which basically meant a transfer from urban employers' to the rural elderly. See: SCHWARZER, Helmut & QUERINO, Ana Carolina – *Benefícios Sociais e Pobreza: Programas Não Contributivos da Seguridade Social Brasileira*. IPEA Texto Para Discussão n° 929. Brasília, 2002.

[4] The *Renda Vitalícia* was transformed into the BPC (Continuous Benefit), within the regulation of the Organic Law of Social Assistance (*Lei* 8.742, 1993); and the rural pension was absorbed by a much 'harder' regulatory stance within the Social Security Organic Law (*Lei* 8.212, 1991).

During the 1990's, both the regulatory stance as well as the political agenda progressively magnified the role of non-contributory cash transfers, targeted at specific vulnerable sectors of society, implemented by central government as well as by local authorities. At central level, conditional cash transfers like 1996 PETI (Child Labour Eradication Program is amongst the pioneers of this new agenda. Local government interventions trace back to the 1995 *Bolsa Escola* in the Federal District and *Programa de Garantia de Renda Familiar Mínima* in Campinas. Multiplied experiences scattered around the country were further unified by central government's *Bolsa Escola* initiative in 2001 (Ministry of Education). By 2003, the *Bolsa Família* Program (BFP) was launched to integrate 4 different central government initiatives: *Bolsa Escola*, *Bolsa Alimentação*, *Cartão Alimentação* and *Auxílio Gás* (cooking gas grant). Finally, in 2005 the cash transfer component of PETI was also integrated to *Bolsa Família*.

Following the integration tendency of cash transfer programs in Brazil, a single registry for all social programs with targeted scope was created by presidential decree in 2001. The registry, called *Cadastro Único de Programas Sociais* (CadÚnico), aimed at identifying the socio-economic profile of the entire poor population of Brazil to inform central government on the effective demand for pro-poor policies.

Today, CadÚnico is the largest and most comprehensive database on poor households and individuals, serving as a back-bone for *Bolsa Família* and other programs. The registry is under the responsibility of The Ministry of Social Development and Fight Against Hunger (MDS), created in 2003 with the authority and responsibility to plan and execute social assistance and food security policies within the central government. As we will see, CadÚnico's data quality ensures a high level of success in targeting the poor to meet their social-economic needs.

This paper is directed to readers that are being introduced to CadÚnico and have an interest on designing or implementing social registries. Therefore, its objective is twofold. In section 2, CadÚnico's most important features will be described and assessed. We will draw attention to CadÚnico's concept, scope, users, data requirements, coverage and variables, moving on to assess the institutional structure and the data quality aspects of the single registry.

In section 3, the paper will make some recommendations concerning the design of new single registries. This last objective draws from the rich experience faced by Brazilian officials and consultants within the cooperation with Ghana, which informed

the process of the design of a pilot CCT in that country[5]. The exposure to the dilemmas regarding social policies, government structures and economic development, can help to build up Brazilian expertise, envisioning a closer cooperation agenda with the African continent. Within the final remarks, these questions will be raised to fuel future discussions.

It seems important to note that albeit the centrality of CadÚnico to the Brazilian social assistance policies, the subject has been dimly explored by the national and international experts. Perhaps because of its very practical nature, there are few publications about CadÚnico[6], which entails some novelty to this paper, and certainly some risk.

2. Brazil's Single Registry for Social Programs - CadÚnico

Launched in 2001, CadÚnico is today a registry system with a clear objective: to register the characteristics of all the vulnerable populations on the whole of Brazil's territory to inform the targeting processes of as many users as possible[7]. Because of this very broad objective, which in actual fact contemplates over 16 million families (60 million individuals), regionally different, scattered over an immense territory, to serve very different policy makers, CadÚnico has a quite a simple but innovative **concept**.

The central idea is to collect and keep updated, through decentralized data entry, a concise number of variables with clear and standardized response options. The relatively easy-to-use format of the questionnaire as well as the proximity to the data generating fact ensures more precision and enables faster updating processes. Alongside, the decentralization as well as the standardization of the responses guarantees, on the one hand, national coverage, on the other, utility for national policy makers' usage.

Interestingly, the more users the registry has the more complete and updated the data will be. This is because there will be more efforts and money put into the

[5] MDS has a cooperation agenda with the Government of Ghana to give technical assistance in their effort to design a CCT called LEAP (Livelihood Empowerment Against Poverty). The assistance package took place from the 2nd of July to the 14th of September 2007.

[6] An excellent official source of information is: DECAU/SENARC "Atualização e Aperfeiçoamento do Cadastro Único de Programas Sociais". Publicação Oficial do Ministério do Desenvolvimento Social e Combate à Fome. Brasília, 2006. The most detailed, non official text on the subject was published by the World Bank office in Brazil: LINDERT, Kathy et alli – "The Nuts and Bolts of Brazil's Bolsa Família Program: Implementing Conditional Cash Transfers in a Decentralized Context". The World Bank Social Protection Discussion Paper n° 0709, 2007.

[7] This objective is somewhat stated in the law that regulates CadÚnico (*Decreto* n° 3.877, 2001) and is very clearly established in the new decree (*Decreto* n°6.135, 2007).

identification of specific populations as well as into updating the information, either through deliberate government campaigns and/or population awareness. With time, CadÚnico has become the entry point to reach a wide variety of government services.

The most important **users** of CadÚnico today are: *Bolsa Família* Program, the world's largest CCT program, with over 11 million beneficiary families registered in CadÚnico; PETI, a program that combines the supply of after-school activities with CCT, with over 800 thousand children registered in CadÚnico; and the national power bill rebate program (*Tarifa Social de Energia Elétrica*) of the Ministry of Mine and Energy which is currently being integrated to CadÚnico and will represent over 13 million beneficiaries registered[8].

To sum up the above, it would be useful to grasp CadÚnico's concept through the illustration below. In theory, there could be three models of database and program management. Model 1 shows databases that do not interact, each related to a central government program, with its own registry system, payments'/contributions' management, conditionality monitoring and other functionalities. This model is not desirable because there is no integration of social policies whatsoever. Government would have no idea of how the group of social policies is affecting citizen's life and there would probably be undesirable overlapping and duplicity, which central government would hardly discover.

Although inefficient, this model is still present in most institutions around the world, private and public alike. Of course, much of the last 20 years' effort to explore synergies and integrate systems has been trying to tackle this problem, and we can locate CadÚnico as a part of that effort.

The second model below is an all-in-one system for social policies, in which government would have all the information pertinent to its programs in one sole database. Although it might seem like the best model at first sight, total integration is not desirable because it entails a high cost to carry and process the data in a timely manner, in order to serve the more dynamic activities such as payments'/contributions' management.

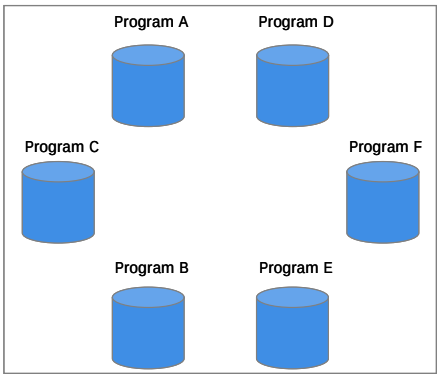
Finally, the third model is closer to CadÚnico's reality. It contains a single registry system that manages and stores the basic socio-economic profile and personal data of all current and potential beneficiaries of programs for the poor. This database provides beneficiary data to all programs' systems, where the other dynamic

[8] There are various other programs that extract their targeted population from CadÚnico. Although these are also important users, usually their specific databases are not synchronized with that of CadÚnico.

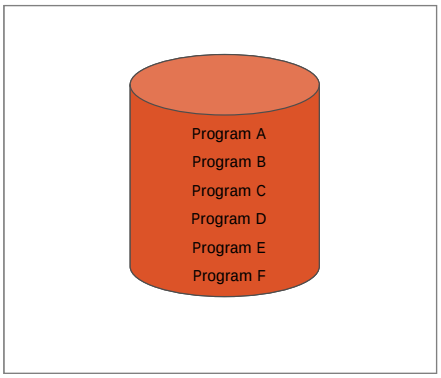
functionalities as well as the more specific data on beneficiary/household livelihood are stored. These programs are linkable to each other, once their beneficiary database is the same. The link between these functionalities and/or programs must be made through a number that uniquely identifies families and people, which in the case of CadÚnico are the household code (15 digits sequence number) and the Number of Social Identification (NIS), an 11 digits sequence number[9].

Illustration 1 – Three Models of Database and Program Management Systems.

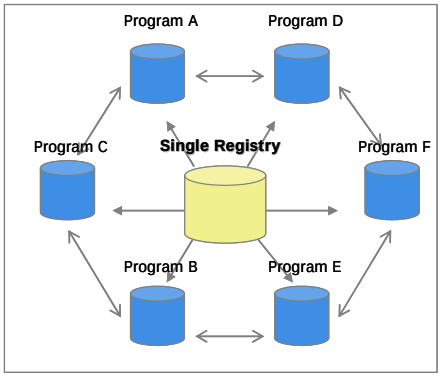
Model 1 – Totally Separate Databases Storing All Functionalities – No Macro Vision



Model 2 – A Unique Database Storing All Functionalities for All Programs – Clumsy Processes



Model 3 – Separate Specific Functionalities Connected by The Single Registry – Fast and Integrated



Even though broad, the **scope** of CadÚnico had to be clearly defined once so many actors participate on the data entry and use. The targeted population registered in CadÚnico comprises all the poor families in Brazil and the selection criterion is simple: **self-reported income poverty**. Hence the scope is encompassed by the two definitions below:

[9] The construction of such numbers is a matter of convenience and convention. Although some might be tempted to compose a number which contains other numbers such as the district data and the date of birth, uniqueness cannot be overseen and the numbers might not, at some point, correctly represent the family or individual (ie: case of migration or identification number change).

i) Family is a group of one or more individuals, related or unrelated, living in the same household, that contributes to the group's income or expenditures ("feed from the same pot").

ii) A poor family is one that has a per capita income lower than (or equal to) ½ the minimum salary per month or one that earns a monthly income of up to 3 minimum salaries[10].

Notwithstanding the above definition, there are other conditions to enter CadÚnico, built-in the questionnaire and the data entry software, that ensure nationwide data quality, but at the same time limit its coverage. These conditions are **data requirements**, the most important being, the need to state a 'more or less' permanent address and at least one valid identification number for each member of the family.

Data requirements are useful, not only to ensure data quality, but also to stimulate demand for other services by conditioning entry upon fulfillment of a specific rule. When dealing with a nationwide registry system these are pertinent concerns. The setback is that, in so doing, CadÚnico fails to capture the demand for such services when it does not allow for 'incomplete' registries. In that sense, in as much as the most vulnerable populations are the ones most displaced, under-registered and therefore most probable to fail in fulfilling the data requirements, CadÚnico might lose coverage particularly where it is needed.

The solution to overcome this dilemma is not an easy one. In the beginning of CadÚnico's lifecycle, there were few data requirements, which enhanced coverage potential. Since then, the evolution of the data entry software and the process of registry as a whole enabled a more strict set of data requirements. Still, CadÚnico has frequently allowed unconditioned registry for specifically vulnerable populations like the homeless and traditional populations (indigenous and quilombolas). But once the data entry software has been configured to reject these cases, registering these populations required a parallel process, entailing some inefficiency to the whole system.

Bearing the above characteristics, CadÚnico has gradually evolved to cover millions of poor families in Brazil. In December 2003, it already counted 7,992,190

[10] These are the definitions of the new CadÚnico regulation (Decreto 6.135 of 26/06/2007). The 3 minimum salary threshold is limited to the targeted population of housing policies. Today, the minimum salary is worth R$380 (US$190), which, taking into account the average family size of 4.2 members within CadÚnico, positions the two per capita thresholds at R$271.43 (US$135.71) for housing policies and R$190.00 (US$95.00) for all other registries. Note that all dollar values in this paper were calculated using the nominal exchange rate of R$2.00 per dollar.

families and 33,053,374 people. Over a 3 year lag, it would almost double to reach 15,270,937 families and 62,026,310 people in December 2006[11]. To assess the registry's **coverage**, the ministry uses an estimation of 16.7 million families, based on the total households under the ½ m.s. threshold on the national annual survey of 2004 (IBGE - PNAD). Taking into account that poverty has presented a tendency of absolute decrease in the last two years, we can securely say that CadÚnico has reached over 92% coverage.

The database contains 40 **variables** of household characteristics, and over 100 variables concerning every individual within the household[12]. The main blocks of data are as follows:

Box 1 – Blocks of Household and Personal Information in CadÚnico

Household Questionnaire	
Household Characteristics	Complete Address
	Number of Rooms
	Household Type
	Household Property Status
	Construction Material
	Sanitation Conditions
	Access to Lighting
	Access to Water
	Water Treatment
	Garbage Collection
Family Composition	Number of Members
	Number of Lactating Women
	Number of Pregnant Women
	Number of Elders
	Number of PWD
Person Questionnaire	
Identification	Complete Name
	Complete Mother's Name
	Date of Birth
	Municipality of Birth
	Identification Certificates and Numbers
Individual Characteristics	Schooling
	Labour Market Position and Activity
	Incomes
	Expenditures
	Relationship to Household Members
	Social Programs Benefits

[11] *Bolsa Fa*mília Program was launched in October 2003 and, from then on, its growth is the most important determinant of CadÚnico's growth. The total number of households and people include only those with an overall active status.

[12] The total number of variables include systems variables that record specific dates (i.e.: date of entry, date of update) and key numbers (i.e.: household unique key numbers, person key number).

The challenge to register and update a database of such proportions is one that has been faced through a **decentralized** structure which we analyze bellow.

2.1 Institutional Design

CadÚnico is today managed through the collaboration of three types of entity, and two levels of government, in a decentralized process. At central level, MDS and CAIXA federal bank, and at local level the 5.564 autonomous municipalities, have shared responsibility in CadÚnico's management.

The municipality, via social assistance or related secretary, is responsible for the planning, execution and update of the registry, targeting on the most vulnerable families. For that it has the responsibility to hire and instruct the data collection and entry personnel, devoting specific information technology infrastructure for the registry and visiting at least 10% of the families for data verification.

Amongst others, the above activities carried out by the municipalities are crucial to CadÚnico. The decentralization implies a more accurate assessment of social demands given the proximity to the targeted population. Thus, most of the outstanding targeting of CadÚnico is owed to the decentralized registering process.

The second partner in this endeavor is CAIXA; a state owned bank whose core business is government's housing credits and administration of labour-capital contributions funds. In CadÚnico's case, its main responsibility is comprised of information technology services. CAIXA develops standard softwares for data entry, transmission and consistency of CadÚnico on a national scale. Within that role, CAIXA also processes whatever eligibility criteria, using the registry data and other databases, to provide the users of CadÚnico with a potential list of beneficiaries. Therefore, it must mirror the changes within CadÚnico to the programs' payment systems.

Amongst the subtleties of the above is the process of uniquely identifying the individuals registered and attributing a social identification number (NIS). In this case, centralization is the key advantage of the participation of CAIXA in CadÚnico's management. First, because there has to be a national level check for the cases of family displacement, and second due to the need for preventing frauds and errors. In this last case the central and monopolistic structure increases accountability.

The Ministry of Social Development and Fight Against Hunger is supposed to set the goals, coordinate the implementation, monitor the development and evaluate the performance of CadÚnico. Within that, MDS coaches municipal officers' about the tools

and processes it develops and monitors CadÚnico's data quality. Hence, central government both instructs and monitors the work being done by the municipalities and CAIXA. The ministry holds the final responsibility for CadÚnico, including the design of the required set of regulations[13].

MDS plays a very distinct role in the management of CadÚnico. Because of its privileged place within the executive power of central government, compared to municipalities and other government structures, it is able to recognize potential and actual users of CadÚnico within a bigger picture of the social policies arena. In this way, it is better positioned to negotiate further developments for the registry and to assure its national coverage.

As a result of the division of tasks between municipalities, CAIXA and MDS, CadÚnico was able to materialize the combination of national coverage and policies' articulation with local accuracy and targeting. This was possible because, even though MDS is a relatively new institution, the truly tricky implementation parts are being carried out by strong and traditional structures, and in the case of municipalities, with a fairly good knowledge of the social needs faced by local people. Still, many challenges remain. Some of the bigger issues of CadÚnico's decentralized structure are of a political nature.

First, it is quite difficult to prevent and monitor the sensitivity of the registry to local political disputes. In this regard, central government has basically two weapons. One is to increase public awareness, either by national advertisement campaigns or by strengthening civil society comities and parallel structures, basically aiming at informing people, and their representatives, of their right towards CadÚnico and the programs it serves. In that direction, the simple selection criteria for CadÚnico and *Bolsa Família* (its main user), has greatly increased the transparency and, therefore, public rights appropriability of the registry process.

Contrary to the above, another line of action to confront local politics influence is to audit local authorities in a top-to-bottom fashion. In this case, MDS is helped by a system of internal and external audit institutions from the public sector (*Rede Pública de Fiscalização*), which has enhanced the surveillance power over municipalities' activities. MDS also has a toll-free telephone number and a whole system of complaints resolution, at the general public's disposal[14]. Other central government

[13] The division of roles and responsibilities of CadÚnico are set in its decree and detailed in the upcoming regulations (*Decreto* 6.135, 2007 and *Portaria do Cadatro Único de Programas Sociais*).

[14] For further information seek: SAGI – "Estudo sobre Controle e Fiscalização do Programa Bolsa Família". Cristina Filgueiras, 2007.

mechanisms to guide and monitor the inclusion and exclusion errors, intentional or not, made by municipalities, include: the CadÚnico geographical targeting limit for each municipality[15]; central government database cross-checks (formal labour market, social pensions and other social policy databases), by which both inclusion and exclusion errors are found; and CadÚnico household and personal data assessment to estimate inclusion error incidence by municipality.

The second political challenge related to the decentralized structure of CadÚnico is the low enforcement capacity between levels of government. Derived from the autonomy principle of both, municipal and federal government, this challenge is mitigated by the signature of an 'adherence pact' of municipal government to CadÚnico. Still, there are no sanctions or appeal mechanisms to resolve possible disagreements, implying a weary case-to-case negotiation process.

All in all, much of the current success of the policies based on CadÚnico is due to its **decentralized** and **government** institutional structure. Both promote legitimacy and in many ways have helped depersonalize these policies away from the president's image. Together with the assumption of greater endurance of government structures, as opposed to civil society organizations and foreign development partners, the wide spread legitimacy of CadÚnico and *Bolsa Família* Program confers greater sustainability to the Brazilian social policies for the poor.

2.2 Data Quality and Incentive Structures

From a general standpoint, data quality is usually measured by the attributes of:

i) Data completeness, which renders actual information, as opposed to nulls;

ii) Data accuracy, revealing the assertive, reliable and updated aspect of the information;

iii) No data ambiguity, meaning no duplicity or doubt about the information;

iv) Standardized content and format, mainly for aggregated analysis;

[15] As a clear formal policy, the geographical parameters were only stated in the 2007 CadÚnico decree. Nevertheless, ever since the actual utilization of CadÚnico (from December 2001 onwards), with the first boost of registering given by the cooking gas grant, the guideline was to include all families with a monthly per capita income of ½ a minimum salary.

v) Functionality, which basically gives the information a purpose[16].

In this section we will present some of the processes, relevant to CadÚnico, which, in our view, increase some of the above features in its database.

Currently, CadÚnico relies on four pillars through which it has guaranteed a high level of data quality. As mentioned in the first section, the concept of CadÚnico itself is the first pillar, with its concise, clear scoped and decentralized features. The other pillars are the municipal staff coaching, the information technology upgrades and central government quality campaigns.

In the last 2 years, the ministry has invested on capacity building, as part of a wider strategy of empowering the social assistance structures in the municipalities. As far as the single registry is concerned, since 2005 some 7.000 municipalities, were coached and recycled in the concepts, regulations and procedures of CadÚnico. A great deal of training material has been elaborated and handed out, with special attention given to the ongoing process of both awareness and revision of the CadÚnico handbooks (questionnaire guidelines and software training). Indeed, the oldest techniques sometimes render the most effective results. There is a general belief within the ministry that capacity building of local level officers has had a great impact on the quality of the data collected and entered.

The information technology structures have also been greatly enhanced to cope with volume and complexity of the quality processes of CadÚnico. In this regard, two main fronts outstand, the data entry software upgrades and the national level database consistencies.

It is widely recognized that data quality is more effectively enforced at the moment of entry. At this point, data checks and standardizations are made, consisting of format masks, drop-down menus, data value parameters and more elaborate tools like local database duplicity checks (warning repetition of names, documents, etc) and cross-reference checks (i.e.: man x pregnant, age x educational level; age x pension income, etc). In this direction, CadÚnico data entry software has had substantial upgrades from version 5.0 to 6.0, implemented in September 2005, and the new version 6.4, implemented in March 2007.

In the case of CadÚnico, the data is entered at an off-line application, where the above checks are run. The data is then extracted and sent through the internet to the

[16] There are a number of data quality studies and methodologies. For one of the most famous ones see: WANG, Richard Y. – *A Product Perspective on Total Data Quality Management*. Communications of the ACM, volume 41, n°2, 1998.

national level consistency at CAIXA. In this level, before the data is actually incorporated to the national database, several checks are made. The most important ones refer to person duplicity identification, which usually happens due to population displacement, but is also quite relevant to fraud control. For that, there is an ongoing development of algorithms by CAIXA and MDS[17].

The batch of data is then returned to the district level with flags of rejection, acceptance, warnings and complementary data to be appropriated by the local level databases. Only then will the local and national databases be synchronized. Most importantly, if accepted into CadÚnico's database, every person is attributed a NIS (number of social identification), given by CAIXA, which, from then on, will trace every operation related to that person.

By the beginning of 2005, CadÚnico had inherited many registries from *Bolsa Escola* Program database, which presented weak quality. It also faced quality problems related to the lack of previous data requirements, data entry checks and national level consistencies. Pertaining to the fourth pillar of data quality, to confront the above situation, the ministry designed a performance based incentive structure aimed at updating records and supplementing record data to fulfill mandatory fields. Two were the actions on that direction.

From March 2005 to March 2006, the ministry implemented a campaign for the recertification of the existing registries and for the inclusion of new registries. For that, the ministry had to create two new concepts. One that defines what is an updated record (which fields needed to be altered and within which timeframe), and another to define a valid record in terms of which fields are mandatory to be filled with valid values[18]. Also, the number of records that did not fit in the above definitions had to be calculated for each municipality, so as to have a goal of recertification for existing records. This goal was then augmented by the coverage gap of the municipality, to find the final recertification goal.

[17] Although at a first glance this might seem simple, it is quite a challenge to find the perfect balanced algorithm: not to be too strict as to point out as doubles people that aren't really the same, but at the same time not to be too loose as to fail in pointing out a real duplicity.

[18] For a family record to be valid, it is mandatory to have the following fields fulfilled with valid values: i) at least one national identification number fulfilled for the family's legally responsible; ii) at least one identification number for each member of the family; iii)complete address; iv)household characteristics; v) schooling; vi) work situation; vii) identification data (name, date of birth, mother's name and gender); and viii)relationship with legally responsible. These are defined in the validation case: *Processo de Validação do Cadastro - Especificação de Caso de Uso: UC001_2005 – Validar Cadastro*, MDS.

All these definitions were regulated and extensively advertised to the municipal officers[19]. Finally, the ministry rewarded US$3.00 per recertified record to the municipality, reaching a total of 8 million family records updated, completed and included[20].

Beginning on April 2006, an ongoing incentive mechanism was then set in place. Every month the municipality is rewarded by its data quality management, measured by the following indicators[21]:

$$\text{Valid Records Rate} = \frac{\text{Number of family records with all mandatory fields filled-out}}{\text{Number of estimated poor families}}$$

$$\text{Updated Records Rate} = \frac{\text{Number of valid family records updated in the last 2 years}}{\text{Number of valid family records}}$$

Because of these incentives, the quality of the data in CadÚnico has showed amazing increase (graphs 1 and 2). The number of record alterations and new entries has reached 22 million in April 2007. In addition, the number of valid records, as a percentage of the total records, has reached 82%[22].

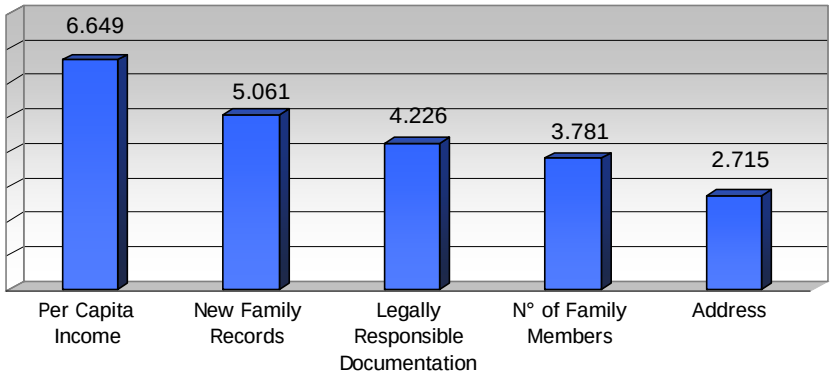
[19] The most important regulation for the recertification process is *Portaria* n°360, 2005.

[20] For more details on this process see: DECAU/SENARC "Atualização e Aperfeiçoamento do Cadastro Único de Programas Sociais". Publicação Oficial do Ministério do Desenvolvimento Social e Combate à Fome. Brasília, 2006.

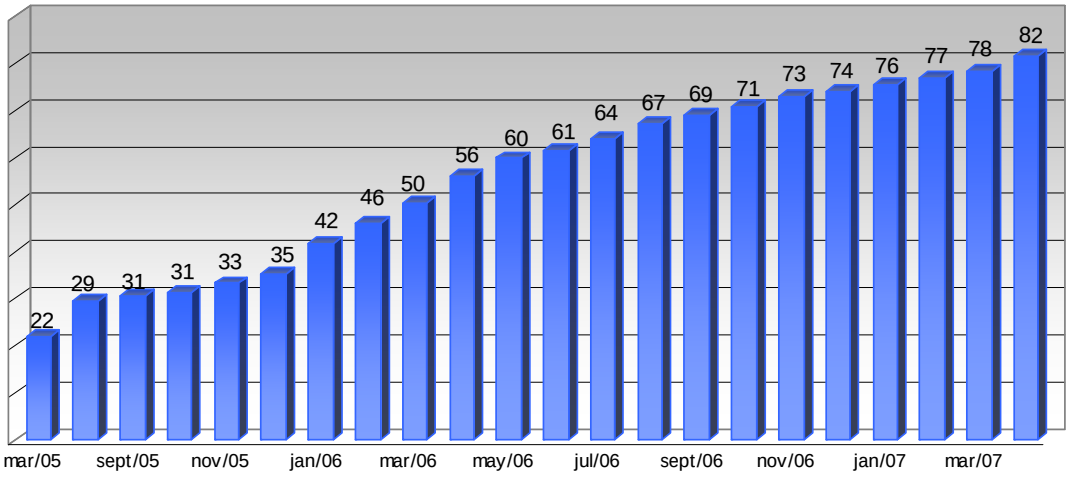
[21] The indicators are part of a wider assessment which also includes conditionality monitoring indicators. The assessment (Índice de Gestão Descentralizada - IGD, *Portaria* n°148, 2006) was launched in April 2006 and, up to April 2007, it was responsible for the transfer of US$ 117.9 millions to over 5.500 municipalities.

[22] Extracted from CadÚnico's database by the Department of CadÚnico (DECAU/SENARC/MDS).

Graph 1 - Family Record Update/Entry by Type of Data - March 2005 to April 2007 - Million Records



Graph 2 - Proportion of Valid Records - March 2005 to April 2007 - %



To increase the quality of coverage (decrease exclusion errors) and to tackle non-poor families' registry (decrease inclusion errors), other central government campaigns aim at the qualification of data through annual cross-checks with national databases. The findings are then publicized to the municipalities, for them to implement the appropriate modifications.

Such modifications can end up characterizing the family as one out of CadÚnico's scope, as is the case of per capita income change, triggered by income audits (cross-checks with formal labour market databases and pension fund databases). Other qualifications rendered the inclusion of families, such as cross-checks with non synchronized databases of other targeted social policies. Besides the direct quality effect of these campaigns, there is an implicit incentive element in that municipalities learn that central government has tools to supervise the data quality of their registry processes.

It is a huge test to promote and perpetuate the quality of a registry of such proportions, as decentralized and spread as CadÚnico. Even more challenging than the data quality attributes we have discussed so far is the functionality aspect of the database. Public policy priorities and methodologies change, and with it, so does the relevance of the information the database carries. CadÚnico faces this exact challenge at the present moment.

Since 2006, MDS has been consulting municipalities, survey experts[23] and CadÚnico users to reform its questionnaire. Again, the challenge here is to serve a variety of social policies, without turning the registry into an intricate, difficult to update database. This will be a great step towards the improvement of CadÚnico's as a tool for implementing effective policies to the vulnerable population of Brazil.

3. Critical Issues for Single Registry Design

Having introduced CadÚnico, it seems appropriate to organize some of the accumulated knowledge of the Brazilian experience, with the intention of guiding a process of (re)design of a single registry system. As we have seen in the case of CadÚnico, the interaction between the type of the questionnaire, the decentralized institutional structure and the data-requirements and checks built in the entry software are crucial to attain a high level of data quality.

Thus, basically, the three main components of the single registry are made of the questionnaire, the institutional design and the technological architecture. These are not separate components, but rather interactive, and should be designed concomitantly. However, they represent very different challenges and depending on the budget and institutional constraints, might not be ideally implemented all at once. Here, we will focus our contribution in the most important tool of the single registry: the questionnaire[24].

Registries usually start as part of a program's effort to understand the populations it covers. As a result, its initial scope is pretty much defined by the program. But a single registry, meant to serve multiple purposes, should have a wider scope than that strictly determined by the program which triggered it.

[23] Amongst them is the national statistical institute (IBGE), who is responsible for the elaboration of the majority of Brazil's national statistics, including the annual household survey (PNAD).

[24] This section draws from the current working experience within the Department of CadÚnico (DECAU/SENARC/MDS) and from the discussions within the Ghana-Brazil Cooperation.

Even though, at first, other users might not be identified, it is still important for the registry to encompass a larger scope. That is because one needs variability in the collected data to be able to rank and, with statistical significance, assess different kinds of vulnerability.

Be as it may, registries have to be functional. Therefore every question must have a clear purpose; otherwise it will just represent a dead-weight loss[25]. It is necessary to assess every question in terms of its contribution to:

i) The targeting methodology of its main users. Specific questions can help identify segments of the population (persons with disability, elderly, pregnant women, etc) and/or can feed into a vulnerability or poverty assessment.

ii) Identify demand for social policies. Geographic distribution, housing, sanitary, educational and health conditions' questions, can subsidize the design of social services for the registry public.

iii) Trigger conditionality monitoring. Questions related to the school number and name, health security numbers and others can help the conditionality personnel to track the location and data of the person subject to conditionalities.

iv) Link-up different databases. Besides the key numbers used by the single registry, which automatically links it to its user programs' databases, there are a few identification numbers as well as personal data (mother's name, father's name, date of birth, birth location, address, etc) that will help on the cross-checks with other databases.

The format of the questionnaire is also decisive to the practicality of collecting and updating the registry data. Some of the desired features of a questionnaire are: briefness; simplicity; a reasonable sequence of questions and blocks of information, maybe leaving the most important questions to the end; and a questionnaire mostly made up of closed questions. These should have a reasonable number of response options, that grasp the most typical values, being as much distinct and mutually

[25] Time spent in answering it, time spent entering the data, bytes of storage, bytes of transmission, bytes of data validation, etc.

exclusive as possible. There might also be a few open fields for flexibility[26] and future re-configurations[27].

Open or closed, it can be argued that there are three types of questions. There are questions which are objective, collecting a verifiable and tangible information, such as the number of rooms in the household, the type of roof, the schooling of the individuals and their income (even though usually self-declared, it could be verified by the amount of money earned or the physical self-production). Usually the objective poverty assessments like proxy means tests, multidimensional poverty indexes or self-declared income poverty, are a function of these types of fields.

There are other not so objective questions, which capture the perception of the interviewer towards the household or the person's general welfare. These are not completely subjective because they are guided by the previous knowledge of the interviewer and the training he receives to perform a good data collection. He then uses his good judgment to inform such conditions as poor clothing or bad rooftops, classifying each question into a range of 'good' to 'very bad'. This classification becomes a measure of relative welfare comparable to the other households the interviewer has collected data from. These questions are very useful if the targeting method uses, at some level, community targeting.

Finally, there are questions of an entirely subjective nature, in which one might aim to grasp the interviewee self-perception of poverty and welfare. These are useful to understand the awareness, the point of view and attitude of people around cultural issues not yet understood by the government. Some examples are: the awareness and issues around HIV/AIDS; the workings of polygamist families; and the role of women and children. These questions would be useful to inform the design of the registry's partner programs.

Given all the above possibilities it is desirable for a questionnaire to be the product of wide consultations to map the need for information and the definitions of specific social sectors. For example, if there is the need to identify persons with disability (PWD), the registry designer should study the national laws, but also consult with the government sector responsible for PWD's policies, so as to conform to their definition. Another good example is the need to promote as much correspondence of

[26] There might be an unexpected need of collecting information, which could be easily grasped through a guideline of fulfilling an open field.

[27] If, for some reason, one or more options to a question become in disuse and there are no others that can capture the correct answer, the category "other" will be inflated. Then it is useful to have an open field to grasp the new categories that need to be considered.

the registry data with the national survey data as feasible, given the particularities and different purposes of the two[28].

The final step when designing a questionnaire is to test it in the field. This process should start with the definition of a representative sample of places which can express the different populations'/regions' adequacy to the questionnaire. Of course, the populations and regions are those that intend to be included in the single registry, not necessarily pertaining to the entire country.

Some other important issues revolve around the institutional structures for data collection and its method. These should be carefully designed once they directly affect the credibility and quality of a single registry. In that sense, although the decentralization might be desirable, it should be a very responsible one. There should be caution in making use of heterogeneous structures and partners once the registry must be as standardized, accountable and sustainable as possible. Also the data collection method should at least in part[29] be made through home visits.

Finally, even though one could have designed a good questionnaire, a solid institutional structure and data collection method, there should be certain checks and balances in place, so as to promote the validation of the data in terms of its veracity and quality. The data validation might happen at the local level, for the main purpose of data correction and evaluation of inclusion/exclusion errors, and at the national level for national duplicity checks and consistency with other national databases. Depending on the volume of data, validation is best done through information technology processes, built-in the data entry software and at the national level structure.

In conclusion, this section has given some insight to issues that might be considered during the process of (re)design of a single registry. Again, these suggestions are drawn from the accumulated experience within the Department of CadÚnico (DECAU/SENARC/MDS)[30]. Still, there are limits as to what extent the CadÚnico experience can be transposed to different countries and settings. We will touch on this issue in the final remarks to this paper.

Refer to the table bellow for a concise picture of the proposed steps to design and start implementing a single registry.

[28] This is quite interesting for targeting monitoring.
[29] There might be the need for the leading agency to set an obligatory minimum percentage of home visits.
[30] The authors of this paper are entirely responsible for the opinions and suggestions stated. The usual caveats apply.

Box 2 – Steps for the (re)design of a Single Registry.

Period	Activities	Inputs	Outputs
Pre-requisites	Definitions of Method of Data Collection Through Institutional and Political Assessment (Descentralized vs Centralized; Verified vs Unverified) Definitions of Targueting Methodology (Proxy Means Test, Vulnerability Indexes, Self-Declared Poverty, Community Targeting)		
T_1	Map Uses and Partners of the Single Registry, Defining its Scope		Keep Memory
T_2	Internally Discuss Desired Levels of Information (ie: person, household, community, etc)		Keep Memory
	Internally Discuss Desired Blocks of Information (ie: education, identification, household conditions, interviewer perceptions, etc)		Keep Memory
	Start Inventory of I.T. and H.R. Infra-Structure Needs Assessment Report		
T_3	Internally Define Questions Within Each Block	National Surveys' Questionnaires Other Countries' Questionnaires National Definitions of Vulnerability (PWD, CABA, Child Labour etc) Targueting and Data Collection Methodology	First Draft of the Questionnaire
T_4	Consultations with Users and Social Protection Experts (Government and Non-Government)	First Draft of the Questionnaire	Second Draft of the Questionnaire
T_5	Consultations with National Survey Experts	Second Draft of the Questionnaire	Third Draft of the Questionnaire
T_6	Contributions' Consolidation and Internal Validation	Third Draft of the Questionnaire	Non-Tested Questionnaire
T_7	Test the Questionnaire Through Sample	Test Database	Questionnaire Evaluation
T_8	Define Final Questionnaire	Questionnaire Evaluation	Tested Questionnaire Questionnaire Manual
T_9	Budget Registry Implementation and Define Registry Funding Structure	Finalized Infra-Structure Needs Assessment	Budget and Funding Commitments
T_{10}	Specify I.T. Software and Hardware for Registry	Tested Questionnaire Questionnaire Manual	I.T. Documentation
T_{11}	Production of I.T. Software and Hardware for Registry		I.T. Documentation
T_{12}	Test I.T. Software and Hardware for Registry		Manual of I.T. for Analists and Users
T_{13}	Implement I.T. Software and Hardware for Registry	Manual of I.T. for Analists and Users	
T_{14}	Capacitate Registering Personnel	Manual of I.T. for Analists and Users Tested Questionnaire Questionnaire Manual	
T_{15}	Start Regitering Campaign	Performance Monitoring	Single Resgistry

4. Final Remarks and Questions for Further Research

The CadÚnico experience has proved to be quite rich in that it has successfully identified most of the poor population of Brazil and reflected this population's socio-economic profile. As seen in section two, the challenge is magnified if we consider the need to update the data, to keep its quality and hence, to put up the regulatory framework and the incentive structures to glue together the decentralized design. This effort requires sustainable funding and planning if it is to succeed.

CadÚnico promotes a better understanding of the particularities of the vulnerable people and their unresolved needs, giving government knowledge as to how, through which mechanisms, they have been excluded of the societies' material and intangible wealth distribution. By subsidizing this knowledge, the idea is to push a pro-poor agenda within both the universal and the residual paradigms. Identifying and openly admitting that the growth pattern (re)produces poverty is the first step, but alone it is worthless.

The above brings us to the question of political will to change the poverty patterns of a country. Political will reflects itself in government spending priorities. Without proper funding commitments it becomes quite difficult to articulate all the needed aspects of a single registry. Off course, the funding needs will depend on the existing gap between the current institutional structures and the designed one, to cover a particular scope. Most probably, the poorer the country is both institutional and financial capacities will be lower. Exactly where social policies interventions are most needed.

Taken as a 'ceteris paribus' condition, fiscal constraints can impose serious difficulties to pro-poor policies. This statement seems contradictory but it is not. One might argue that targeted policies became very popular particularly because of tighter fiscal stances, imposed by the structural adjustments in the developing world. Tighter fiscal policies create a serious tension between the efficiency and equity attributes of policies[31]. But if the objective is to tackle poverty with efficacy, then even targeted policies need a vast articulation with classical ones, such as health and education and, in our under developed countries are less residual than one might wish. Therefore, depending on the objective, funding commitments need to be high.

Many programs for the poor end up relying heavily on international donors and/or lenders for funding. This is not ideal once these fundings are usually

[31] The question whether public policies should be judged by their efficiency is quite controverted and is beyond the scope of this paper.

committed upon conditions which might not be, ideologically and politically leveled with governments' and civil societies' interests. Also, there are questions about sustainability. Although these are true, a country might promote civil society awareness and program legitimacy making use of these funds for the starting grounds, having stronger elements to push for government funding in the future.

In terms of the design, fiscal constraints might narrow the targeting in both ways. One is to limit the population segments (categories) such as families with child labour, HIV/AIDS prevalence and disability. The other is to target the poorest families of all, up to a given limit. Both would increase the need for very fine and precise information to objectively assess eligibility. Hence, narrow targeting generates a greater need for data to be able to show enough variability to actually rank and differentiate the poorer families as well as identify particularly tricky segments. This is, off course, an additional cost.

On the implementation side, there is also a tendency to rely on NGO's and volunteer community comities. The multiplicity of actors involved can implicate a greater difficulty in coordinating, articulating and, ultimately, managing the registry. There would be, thus, a need for tighter enforcement and control mechanisms, which, again, represents more cost.

These considerations show that a variety of elements have to be taken into account in the process of designing and gaining political support for pro-poor policies. Sometimes, policies that are too narrow and fragmented because of fiscal constraints end up having their efficiency reduced.

The quest to eradicate poverty is one that needs the support of many interventions, from labour market policies and regulations to cash transfers, and the fiscal requirements to implement tools such as the Single Registry are high. The negotiations within the fiscal policy management arena are the first step to actually put in practice sustainable pro-poor policies. Government is an essential part of the solution and it is nothing more than its responsibility to face this historical challenge with a clear and open mind.