WORKING PAPER
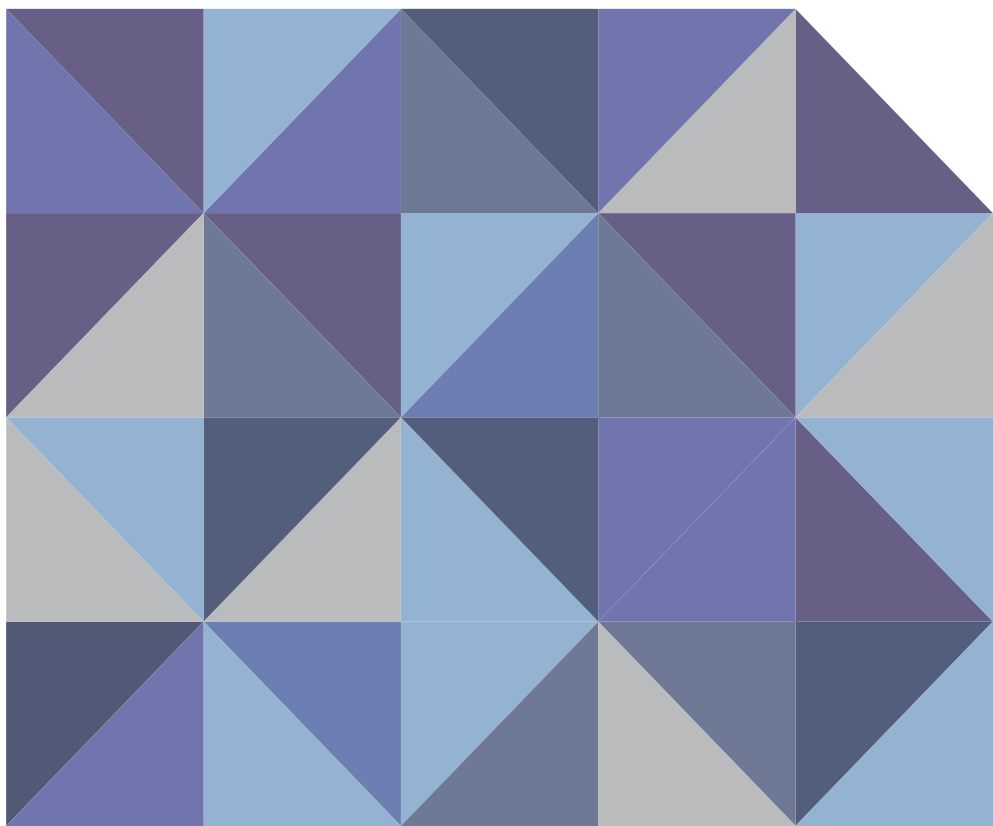
Integration of administrative records for social protection policies: contributions from the Brazilian experience

Letícia Bartholo, Institute for Applied Economic Research
and International Policy Centre for Inclusive Growth

Joana Mostafa, Institute for Applied Economic Research

Rafael Guerreiro Osorio, Institute for Applied Economic Research
and International Policy Centre for Inclusive Growth

INTEGRATION OF ADMINISTRATIVE RECORDS FOR SOCIAL PROTECTION POLICIES: CONTRIBUTIONS FROM THE BRAZILIAN EXPERIENCE[1]

Letícia Bartholo,[2] Joana Mostafa[3] and Rafael Guerreiro Osorio[4]

ABSTRACT

Integrating information for the purpose of articulating social protection policies is hard work. It requires a combination of political will, capacity for institutional cooperation, software development and direct communication channels with citizens. Because of this complexity, countries that pursue this objective often cooperate to exchange knowledge, and the Brazilian Single Registry (*Cadastro Único*), the backbone of some 20 social protection programmes, is frequently cited as a successful example of integration. By sharing the experience of the Single Registry, this text discusses some of the essential elements required to design and operate such instruments of social policy integration. It brings to light some of the challenges that are still being faced to fulfil the promise of greater integration among social protection programmes and to provide greater ease of access and respect to citizens.

Keywords: *Cadastro Único*, *Bolsa Família* programme, Single Registry, assistance, entitlements, family allowances, means testing, poverty alleviation, public assistance, safety net, social welfare programmes, SSI, transfer payments, transfers, welfare effects, welfare policy, welfare programme, welfare provision, work welfare.

1 INTRODUCTION

A given country has five major social programmes, each devoted to a specific set of vulnerabilities that affect individuals throughout their lives. The first programme aims to improve children's nutrition, through direct cash transfers to families and the nutritional monitoring of children. The second programme is also meant to promote the schooling of children through financial benefits, but this time coupled with the monitoring of school attendance. The third one aims to improve the sanitation and housing conditions of families living without adequate access to water, sewage and electricity, with priority given to those living in areas at risk. The fourth programme provides professional training to youths and adults. And the fifth one locates elderly people living in poverty and pays them a monthly financial benefit—enough to ensure a dignified life.

Each of these programmes has a specific target population and operates with a particular set of socio-economic variables and mechanisms to determine who should be served. If we look at statistical data about the country, however, we notice clear similarities in the target populations of the different programmes: the programmes focus on certain geographical regions and on the poorest 30 per cent of the population.

Considering these similarities, a manager in charge of these social programmes would certainly ask himself: Do these programmes serve the same households? Do children who leave the nutritional support programme get access to the schooling programme? Do children in the nutritional support programme and the poor elderly population have access to the basic sanitation programme? Do the living conditions of these families improve as youths and adults become more skilled? Can some of the programmes be redesigned to achieve better results?

In that same country, a poor citizen with little access to information goes to a social assistance office[5] looking for support to raise his four children, aged 2–19 years of age. At the office, he enrols his 2-year-old son in the nutritional support programme, but is advised that if he wishes to enrol in the other three programmes to which he is entitled (housing improvement, support for his children's schooling, and professional training for his adolescent son), he would need to go to three different offices to find out what documents are needed and how to apply. It would take the citizen at least three more days to get this sorted out. And though this citizen may be uneducated, he would surely question the need to go to four different places to secure state benefits: it would all be much easier if everything were resolved at a single location.

This simple example illustrates how the lives of citizens and public policy managers could be made easier if the information on social protection policies were integrated. It also shows how integration could even improve the results of state interventions in the fight against poverty and other social vulnerabilities, by making a set of previously disconnected policies more cohesive.

Integrating information for the purpose of articulating social protection policies is hard work. It requires a combination of political will, capacity for institutional cooperation, software development and direct communication channels with citizens. Because of this complexity, countries that pursue this objective often cooperate to exchange knowledge, and the Brazilian case—with the creation of the Single Registry for social protection programmes offered by the federal government—is frequently cited as an important example of integration.

Over the past seven years, the Single Registry has been considered an international example of integrating interventions targeting the most vulnerable populations. Its database contains information on 40 per cent of the Brazilian population and is currently used by more than 20 social programmes in the country. This, however, did not happen overnight, nor was it a simple undertaking. And yet many challenges remain for Brazil to effectively integrate its social protection policies—even non-contributory ones.

By drawing on the experience of the Single Registry, we will discuss some of the essential aspects for assembling the instruments needed for the integration of social protection policies. We refer to policies focused on protecting against social risks beyond the classic risks already provided for by the social security scheme: loss of income due to illness, disability, old age, death or imprisonment. Here, we focus on the myriad of government programmes and actions put in place to protect families and individuals with low contributory capacity: usually those excluded from the protections afforded by labour and social security regulations. In this sense, we shall focus our attention on the remaining challenges to the integration of the services and social protection benefits through which goods and rights are provided, at subsidised or zero costs, as well as incentives and support to improve health, education, working conditions and civil rights.[6]

The choice to address these challenges assumes that the government should focus on providing a path **into** these services and non-contributory social protection benefits, even though many people might emphasise the need for citizens to find ways **out** of them. To what extent is the State using the information it already has to locate citizens who are vulnerable and deprived of their rights and basic well-being? To what extent do existing social protection policies truly reach the vulnerable population? Are there any uncovered needs? Do the documents required for access to social programmes—or the opening hours of social assistance units—ultimately exclude the most vulnerable? Is there a permanent public service network responsible for inputting and updating information about the vulnerable population, to ensure the services offered meet their needs? In this sense, reflecting on how to build integrated information records is a way to strengthen the State's ability to provide a modicum of well-being for its citizens.

As a way to contribute to this discussion, this text has been structured in five sections, in addition to this introduction. Section 2 outlines the political and operational advantages of integrating the information used by social protection policies, while Section 3 briefly outlines the key components of this integration: an integrated registry, social programme management systems and an integrated social information system (SIIS).[7] These are based not so much on the Brazilian experience but on the specialised literature available on the integration of non-contributory public policies and the development of an SIIS. Although Brazil does not have an SIIS of its own, most countries that develop single registries pursue this higher objective; as such, it makes sense to present readers interested in the topic with the advantages of such integration, as a foundation for the upcoming sections of this paper. Section 4 is the core of what we wish to share: based on the hits and misses of building the Single Registry, we will outline important aspects of the design and operation of an integrated registry from institutional, administrative, operational and technological perspectives. The fifth section discusses the use of integrated registry information to monitor and evaluate the registry itself, as well as the programmes that use it (henceforth referred to as 'user programmes'); it also raises certain issues relevant to building an SIIS. The sixth section is devoted to final considerations.

One caveat: although the integration of dispersed programmes is a laudable objective and should be pursued, in practice no single registry or management system can fulfil all these purposes. There should be no delusion about the power of theoretical solutions when solving real and complex problems. Protection of privacy, the right to consent by citizens, decision-making and political processes at different levels and the diverse types of vulnerability are all factors that pose legitimate limitations on so-called bureaucratic 'blanket solutions'. In this sense, the scope of this paper will be limited to a reflection on the integration—not unification—of comparable characteristics that could be harmonised across the processes involved in the registration, selection and management of social programmes, thus facilitating the lives of citizens and public managers alike.

2 ADVANTAGES OF ESTABLISHING INTEGRATED ADMINISTRATIVE RECORDS FOR SOCIAL PROTECTION POLICIES

At the individual level, establishing an integrated and systemic approach to collecting and storing information on social protection policies helps the State coordinate its activities relative to the various vulnerabilities experienced by citizens throughout their lives. An additional advantage would be greater respect from the State towards its citizens, to the extent that integration can facilitate access to social protection policies.

At the population level, an integrated approach allows the State to assess the scope of its initiatives and the remaining gaps in protection. This overview can provide an important input for the examination of overlaps between existing interventions and the design of new ones, thus contributing to the universalisation of social protection for the resident population.[8] Schematically, some of the advantages of integrating information on social protection policies are as follows:[9]

- It promotes economies of scale and reduces the duplication of work and transaction costs by unifying registry inclusion and updating efforts. Since these efforts only need to be carried out once and can serve various policies, they ease the burden on citizens and public services and facilitate policy monitoring and evaluation. Moreover, the integration of a permanent information technology (IT) structure—in terms of both infrastructure and human resources—makes it easier to insert and update information for social protection policies at any time, making the State's response more dynamic to changes in the population's living conditions.

- The information collected is more secure, transparent, objective and comparable, as integration implies some degree of cross-policy standardisation in terms of eligibility concepts and criteria, and procedures for collecting, storing and transferring data, among others. Such interoperability requirements across policies can transform information and concepts that were previously dispersed, unreliable and poorly accessible into a single, well-known operational framework. For this reason, the entity in charge of integration or unification has to lend credibility to the information used or produced by the policies in question, acting as a curator.[10]

- It makes monitoring and evaluation faster and less costly, by i) harmonising the requirements and concepts used by social policies and those used by the official statistics agency; ii) harmonising administrative records, which would reduce the

need for and the costs of sample surveys; and iii) making administrative records more dynamic, which would make monitoring a routine activity.

- It enables the design of active service provision strategies to be offered by the State to specific groups, and to address the needs identified by: i) the integration of administrative records, which allows the eligibility of uncovered citizens to be checked on a case-by-case basis, and helps form active search strategies for existing services and policies; ii) benefits granted automatically with only a modicum of new information collected; and iii) more comprehensive information, to inform the design of new services and policies offered in the country based on an analysis of potential demand.

Considering the aforementioned advantages, the establishment of integrated administrative records about social protection policies can help structure and organise a permanent service network for citizens. A project of this type provides important tools to manage citizens' demand for social policies, in addition to objective instructions and funding for public services; in doing so, it encourages the structuring and strengthening of a public social assistance network.

According to Barca and Chirchir (2014), countries have established these integrated models based on three primary objectives. The first objective is to promote the coordination, supervision, monitoring and evaluation of policies. Integration makes it possible to identify the people who participate in each initiative—thus avoiding overlaps and duplications—facilitate planning across several fields of social protection and establish coordinated monitoring and evaluation strategies across social programmes.

The second objective is to consolidate the processes used to select the target populations of social protection programmes, by sharing indicators about vulnerability and poverty. This does not mean that all social programmes should use the same indicator, but rather that information about a segment of the population will be available to inform social programmes and allow them to serve their target populations as part of a common and comparable scenario. This can reduce exclusion and inclusion errors, increase coverage of the most vulnerable people and reduce the services provided to non-vulnerable people who are ineligible for specific social programmes.

The third objective is to integrate operations and services to serve citizens—i.e. to build mechanisms through which citizens can, in a single location (or a few locations), obtain information about a set of social protection programmes and join initiatives that may be of interest to them and fit their profiles. In this type of integration, the way services are designed does not reflect the fragmented nature of social protection policy management across government sectors. The implementation of social protection programmes may be sector-based, but citizens' access to them would be facilitated by the existence of a 'one-stop shop'.[11] In practice, these one-stop shops will be different from one another; the types of social protection policies that citizens can access through them will vary from one country to the next: some countries have better targeting, and the one-stop shops focus on the poorest segments of the population, to ensure that they are included in income transfer programmes; in other (larger) countries, citizens can also access programmes designed to improve access to housing or the job market (Ebken 2014).

It is worth noting that the objectives pursued by countries that have achieved some degree of integration between social protection policies and the registries and systems that support them can work in favour of—or against—the inclusion of vulnerable citizens.[12] Let us consider the objective of monitoring a set of programmes offered to a given population. As a matter of priority, we may choose to exclude citizens that do not fit the criteria set for a certain benefit, without foreseeing their protection by another policy. In view of this, more inclusive targeting might be needed to organise the services provided by the State, eliminate gaps and promote complementary benefits, in addition to simply eliminating inadequacies.

The same holds true for registration information aimed at determining, in a more republican and transparent fashion, whether citizens are eligible for social protection. The mere delimitation of the data collected in a given registry record—as well as the selection criteria used for protection, of course—must necessarily exclude some of the residents and select others as more deserving of the State's attention. This would involve using certain types of documentation, registering only one kind of income and not another, or using the ownership of a television (or not of a refrigerator) as a proxy for assessing poverty. Using these definitions might help us determine the average target population, but they are tragic choices for those who are destitute. The main bias when operating such registration and selection instruments, be it in terms of inclusion or exclusion, will be tied to the political positions underlying the most strategic levels of public policy decisions, as well as to the average and local levels of implementation; it will also depend on the positions and moral cachet of bureaucrats who are in direct contact with citizens.

Contradictions can be found throughout the public policy chain; knowing about them is crucial to avoiding unfair exclusions and promoting equitable inclusion. The creation of transparent and systemic mechanisms for the registration, selection and granting of benefits is not enough to ensure isonomy and justice and to avoid discrimination. Other instruments are also required at the operational level, such as ombudsman and complaints systems, public consultations and social participation mechanisms, so that citizens can also appeal and rectify possible biases at the administrative level.

3 SYSTEMIC COMPONENTS ESSENTIAL TO THE INTEGRATION OF INFORMATION ON SOCIAL PROTECTION POLICIES

The components of integration vary with the objectives of each country and the levels to be achieved. Barca and Chirchir (2014) state that there are two basic components to establishing integrated information systems on social protection: an integrated registry and an SIIS. As we shall see in this section, Brazil does not have an SIIS, but some of the information management systems specific to social programmes use the Single Registry. This means that the management systems used by the Single Registry's user programmes are a systemic component intermediate to the level of integration that could be achieved with an SIIS. These three components (registration, management systems and SIIS) can be best understood by examining the chain of activities involved in the delivery of social programmes, as shown in Figure 1.

According to the theoretical chain shown in Figure 1, social programmes or services begin their activities with a search or delivery strategy and then add registry information on potential beneficiaries to shed light on their needs and social status. When some of the programmes are offered to the same target populations, such as low-income households, then it makes sense,

under an economic bias, to unify the former block of activities. This refers to the activities depicted in blue under programme 1, which could, in principle, be integrated or unified with the same activities under programme 2. Integration represents the first systemic component: an integrated registry.

FIGURE 1

Chain of activities involved in the delivery of social programmes: registration processes that can be integrated
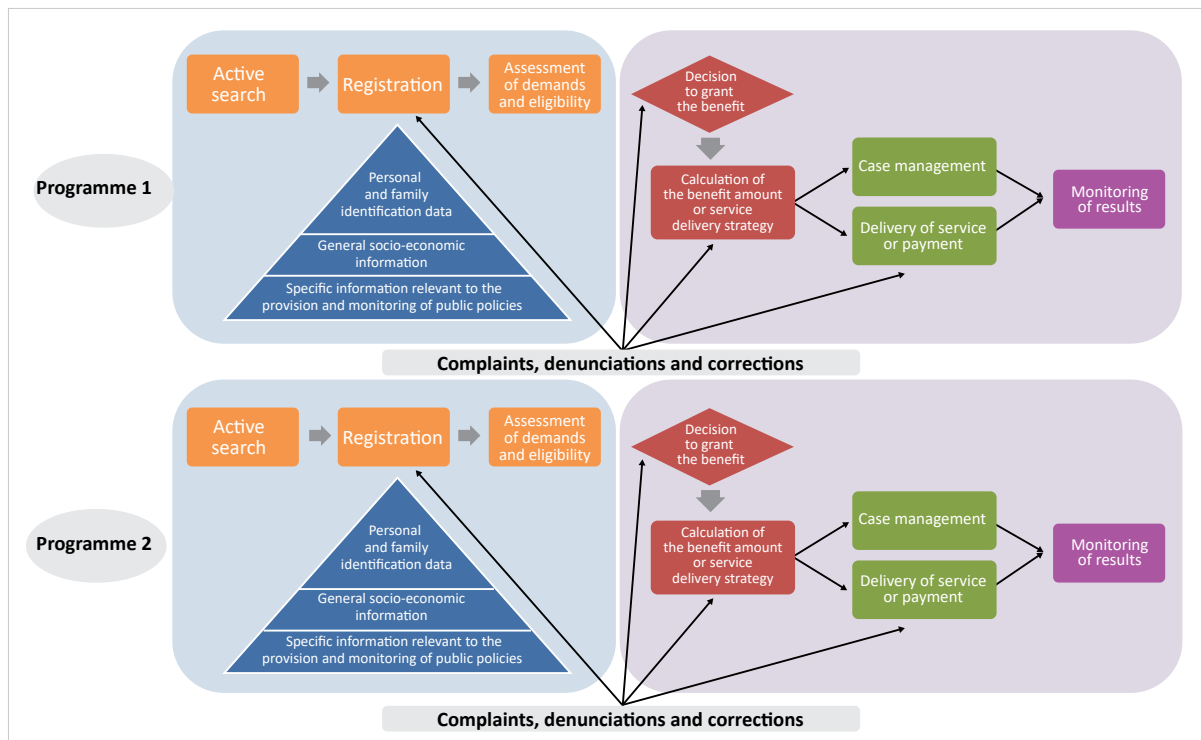
Source: Lindert (2016). Available at <https://goo.gl/CBvU3m>.

In addition to avoiding the duplication of registration efforts, the integration of registration activities also normalises and standardises the protocols, procedures and concepts behind the data and the information collection process. This is also desirable for subsequent analyses of overlaps or complementarities across programmes focusing on the same population. That is why it makes sense to build an integrated registry—a social registry based on databases containing data that can be used to identify individuals and their households from a socio-economic standpoint. The data are harmonised and synchronised, and allow social programmes to select and monitor their beneficiaries in a standardised fashion.

The records may be expanded, corrected or checked by several data inputs processes, harmonised from a conceptual perspective and temporally synchronised with all other data inputs and repositories they contain. According to this definition, the Single Registry is a prime example of integration, as the whole procedure takes place through a single gateway, and with a single application, storage and governance scheme. As such, activities under the Single Registry are managed by a single entity, the Ministry of Social Development (*Ministério do Desenvolvimento Social*—MDS), which is in charge of all procedures for searching, collecting, registering, verifying and distributing information. Nationwide unified management facilitates

the standardisation, security and reliability of data. This is due to the high degree of network specialisation, focused primarily on specific registration activities, and to the fact that there are fewer conflicts of interest, because the individuals in charge of registration activities are not the same as those who grant the benefits.

Nevertheless, other forms of integrated registration are possible and come with their own advantages and disadvantages, such as registration directly in the management system of each social programme. In this case, programmes use the same basic questionnaire and also incorporate additional information about their beneficiaries. This kind of integration is meant to establish a common repository with data that are interoperable across programmes by means of shared questionnaire templates, requirements, guidelines, metadata and protocols.

This model has the advantage of dispensing with a specialised structure for the basic registry, but two significant challenges must be overcome before it can yield substantive benefits: i) collection must be standardised across the agents of different programmes with different service structures, which are sometimes outsourced or supported by networks of non-governmental organisations (NGOs); and ii) non-beneficiaries must have access to registration, and the selection process must be transparent. This is because it is possible for a programme to choose to register only those who are eligible for the service, thus establishing something of an informal selection process prior to registration. This limits the transparency of selection processes taking place outside the system and poses a considerable risk for programmes targeting the most vulnerable populations.

BOX 1
Is the Single Registry truly unique?

The Single Registry is not the only registry of potential beneficiaries of Brazil's social protection policies. Brazil has a few other important administrative registries used to identify social protection beneficiaries, the most relevant of which is the National Social Information Registry (*Cadastro Nacional de Informações Sociais*—CNIS), which predates the Single Registry and supports the granting of social security benefits (retirement pensions and allowances) and the Continuous Cash Benefit (*Benefício de Prestação Continuada*—BPC).

The BPC is a non-contributory benefit in the amount of one minimum wage, paid to persons with disabilities who are unable to work, as well as elderly people aged 60 years or older. To be eligible for the benefit, beneficiaries must earn a monthly income per capita up to a quarter of the minimum wage (approximately USD75).

Attempts have been made over the years to integrate BPC information into the Single Registry, but the results so far have been below par (due to several factors). These factors range from the low priority assigned to the topic, to conceptual differences between the concepts of family and income,[1] as well as the overly demanding selection process for the BPC (in the case of persons with disabilities, eligibility requires an expert report issued by social security professionals). More recently, Decree no. 8.805/2016 launched a campaign for the mandatory inclusion of BPC beneficiaries, but the extent to which data from the Single Registry can be used to select BPC beneficiaries is debatable, as shown in Box 3. Nevertheless, the Single Registry has established itself as the largest registry of potential beneficiaries of programmes, benefits and non-contributory services; at the federal level, it is used by more than 20 social programmes and serves as a reference for practically all services and benefits offered by the Unified Social Assistance System (SUAS).

Source: Prepared by the authors.[13]

Note: 1. Avaiable at <https://goo.gl/NDcWeo>.

When we follow the chain of delivery of a given social programme, we arrive at a second block of activities, which concerns the management of services or benefits delivered.

It all begins with the citizen's decision to request entry into the programme, and the government's decision to grant it. At this point, there is a delicate clash between a citizen's request to access some type of protection he or she may be entitled to, and the administrative decision to grant the benefit, which is strongly influenced by fiscal considerations. This clash has important legal implications on citizens' access to their rights and should be handled in as much detail and with as much transparency as possible, to ensure that it is accessible to citizens.[14] Even at this stage, the government will determine the types, values or characteristics of the benefits and services, and when, where and how they are delivered. Of course, there may be disagreements along the way that lead to appeals or audits of administrative decisions. If there is agreement on the selection of benefit recipients, the process advances to the effective delivery of the service or benefit, through the means, staff and equipment required for payment or service provision.

Both the monitoring of requirements and grants and the level of effective delivery of a programme or service require a system to record different events specific to each programme, such as withdrawal dates and places and the start and suspension of beneficiaries from the programme, in addition to more qualitative records, such as the progress of—or difficulties faced by—families regarding education, economic insertion and others. This information is specific and cannot be shared with other programmes at the transactional level—i.e. the level of data entry, correction or complementation—only at a subsequent monitoring level, whenever relevant.

Thus, the second systemic component (depicted in purple in Figure 1) consists of several systems that enable the specific management of each social programme. This system is connected to the integrated registry and to other specific data needed for managing social programmes. In general, a system used to manage the information of a single social programme is called, in literature, a management information system.

A given programme may be monitored by its own management system, but the integrated monitoring of a strategy that encompasses several interventions begins with the linkages between the integrated registry and the specific management systems used by social programmes, in such a way as to coordinate information among social protection programmes and, as may be the case, between them and other public policy sectors, as well as statistical surveys and censuses. The third systemic component is an SIIS,[15] which draws on integrated data and has the potential to facilitate the monitoring and evaluation of social protection programmes as a whole (Azevedo, Bouillon, and Irarrázaval 2011).

It should be noted that, ideally, an integrated registry and an SIIS should not be confused with a social programme management system. The registry is a database—either physical or virtual, since the architecture is not central to this discussion—that provides these programmes with information to identify and select their respective beneficiaries according to specific characteristics. These records may or may not be fed back into each programme's management system, bidirectionally. After selection, beneficiaries must be monitored through management systems specific to each programme, linked to the database through a set of identifying data about each individual. This set contains an identifier number for each individual and household registered, either provided by pre-existing civil registration or identification services or generated by the integrated registry itself.

The SIIS, in turn, is fed by information from the integrated registry and the management systems of social programmes, but has the broader objective of integrating information

across areas and facilitating the joint monitoring of interventions. For this reason, it must also coordinate information from official surveys and censuses carried out within the country, as well as from other government administrative registries, such as taxpayer protection schemes and tax records.

FIGURE 2
Essential systemic components of integrated protection policies
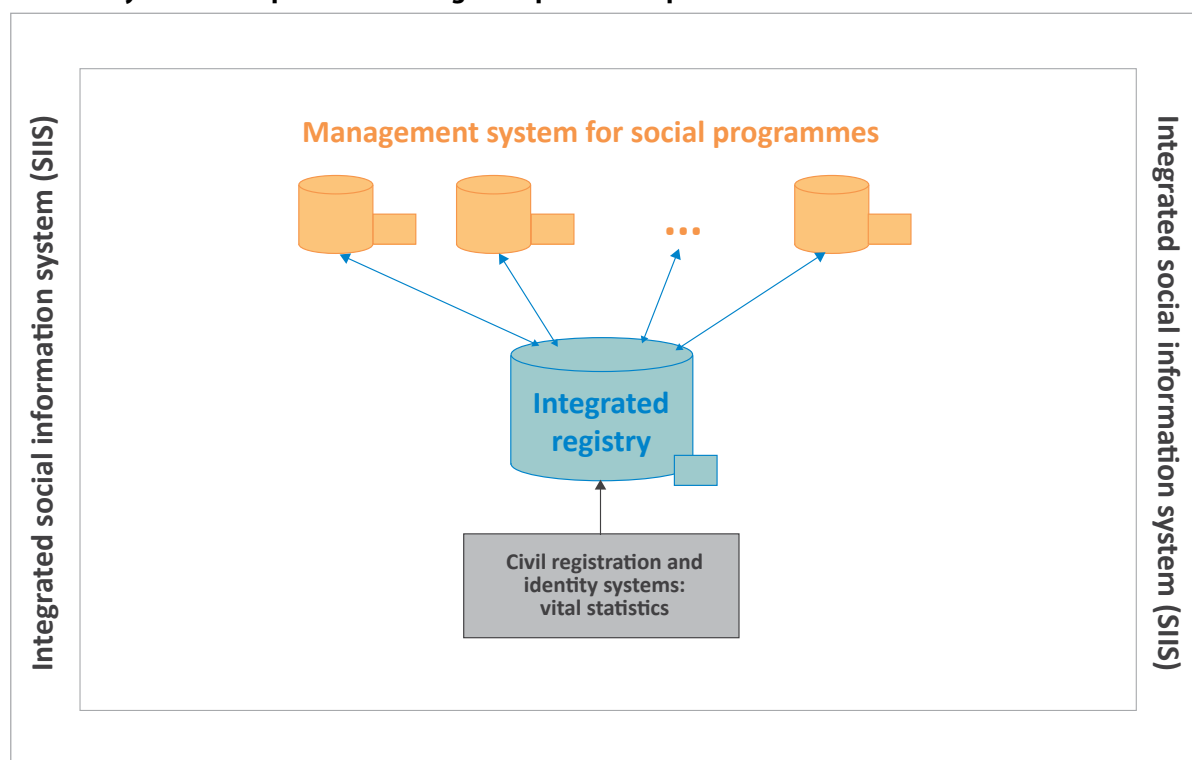
Source: Prepared by the authors.

Once again, despite the comprehensiveness of the Single Registry, Brazil lacks a system capable of articulating its data with that of user programmes, which would allow for integrated monitoring of processes and outcomes. It does, however, include a few social programme management systems that make good use of the Single Registry, and which could be seen as intermediate steps in the development of an SIIS. Additionally, the information in this registry and in the programmes that use it are often consolidated at the level of national and strategic management, to outline the general framework for serving the poor population by means of different programmes.

When we examine these systemic components from a theoretical standpoint, we tend to conclude that each of them is constructed on the basis of a planning process sufficiently well organised to encompass all relevant management dimensions of the social programme(s) they refer to. In other words, we envision the management system for a social programme in its entirety, planned and organised into modules systemically interconnected and linked to the registry and to an SIIS. That would be the ideal scenario, and a possibility for a country wishing to start anew or redesign the systemic architecture behind social programme management. In many cases, however, that is not what happens: sometimes, different dimensions of the same

social programme are managed by specific systems that are not interconnected; thus, the initial challenge is to connect and integrate them as modules under the same system.

4 DESIGNING AND IMPLEMENTING AN INTEGRATED REGISTRY: INSTITUTIONAL, OPERATIONAL AND TECHNOLOGICAL ASPECTS

The development of an integrated registry raises a few preliminary questions: Who will coordinate it? Who will be responsible for entering data into the registry? How to ensure that it is actually used by a large set of social protection programmes? And how to ensure data are used properly, with due respect for the privacy of registered citizens? What data should be collected, how, when and by whom? How to ensure this information remains updated? How to set up data checks and validations? These questions need answers before the registry can be useful for social protection policies.

4.1 INTRA- AND INTERGOVERNMENTAL COORDINATION

As regards coordination, if the goal is to build a nationwide registry, obviously the central government must be in charge of primary coordination efforts. Barca and Chirchir (2014) point out that, in accordance with international best practices, the integrated registry must be managed by a unit sufficiently independent from those that manage the programmes that use the registry. This is positive because it strengthens registry coordination and prevents it from bending to the wills of specific programmes. In other words, it makes it easier for the integrated registry to preserve its nationwide nature when used to select beneficiaries of social protection programmes, and ensures that the registry is not confused with the management systems of the programmes it serves. Such autonomy, however, does not mean that the registry should ignore the information demands of these programmes; if this were to happen, the registry would likely no longer be used, which would defeat its purpose. The integrated registry must be permeable to the needs of the various programmes but should not be denatured by them.

Such an independent arrangement, however, is not always possible and will not necessarily be the best option, because in some cases the integrated registry is not created from new but from pre-existing programme registries or as part of a more comprehensive programme. In these cases, the registry might be attached to a guiding programme—one that, due to its breadth and significance, can promote and induce the collection and updating of household data satisfactorily, and thus allow other social protection programmes to take advantage of these efforts. In many countries, the guiding programme is just a broad income transfer programme aimed at vulnerable populations. The guiding programmes often originate from the unification and simplification of previous programmes, such as subsidies and different types of cash transfers.

Several classifications can be used to standardise the operation of administrative records.[16] Barca and Chirchir (2014) point to the experiences of four countries with nationwide data collection models for integrated registries, as outlined below.

- Centralised model: data are collected directly by the central management of the integrated registry, and not by specific programmes, such as in the cases of Chile and Indonesia.

- Model centred on a social programme: data are collected by the network that operates a specific social programme, and other programmes use the national database. This is what happens in Brazil, where the Unified Registry and the *Bolsa Família* programme are operated by the same network.

- Consolidated model: the databases of various programmes are systemically linked together, thus creating an integrated registry, as in South Africa and Kenya.

- Virtually consolidated model: there is no consolidated database *per se*, only systemic logical links created with the SIIS. This is the case in Argentina.

Defining the Single Registry as an example of the second model is, in our view, accurate from a historical perspective; from a legal perspective, its management is tied to that of the *Bolsa Família* programme. It should be noted, however, that the increased use of the Single Registry by other social programmes in recent years has made it less dependent on one specific social programme. Of course, *Bolsa Família* was, and still is, the Single Registry's guiding programme, the key driver that keeps it dynamic, with information inputs, outputs and updates carried out daily. Nowadays, however, additional programmes also help preserve this dynamism.

As for the responsibility for data collection, depending on the country's administrative structure and its level of decentralisation, the operation of the integrated registry may be shared with subnational governments, which would be tasked with collecting and updating the data about registered families. Barca and Chirchir (2014) point out that subnational governments know the socio-economic characteristics of their respective regions, which makes them better suited to locate individuals for registration purposes. However, if programmes using the integrated registry are funded primarily by national budgets, there may be an incentive for local governments to register families outside the specified profiles. As such, the national government must set up control mechanisms to monitor the reliability of the data collected and the incentives for subnational governments to ensure that family-related data are entered correctly.

Decentralised data collection need not necessarily involve other levels of government, if the integrated registry can be operated by a central entity with operational offices spread across the country. This model is often chosen by countries that are smaller, in either population or size; the strategic management of the registry may or may not be linked to the central body that operates it. In Brazil, this model is similar to the management and operation of the contributory pillar of social protection, in which a ministry is responsible for strategic management, while the Instituto Nacional do Seguro Social (INSS—*National Institute of Social Security*), a semi-autonomous body under that ministry, operates the social security benefits through its 2,000 branches spread across the nation, the internet and by telephone. Of course, the service model and the inter-federative framework of social protection policies have a direct impact on effectiveness; this should be analysed case by case to identify changes that may facilitate access without compromising the standardisation of procedures and the quality of services.

Basically, it is important to determine whether the institutional arrangement chosen for the management of the integrated registry has the capacity for coordination and standardisation across the sectors involved in the central government, the subnational governments and the territories (when applicable), and is sufficiently independent from the managing bodies of specific social programmes to avoid being unduly denatured in its objective or operation.

BOX 2
The decentralised management index (DMI)

In Brazil, the federal government's financial incentives to the municipalities for the collection and updating of Single Registry data began in 2005, embryonically at first, as the federal government began to remunerate the municipalities for each successful registration (i.e. registry data completely filled out) or update of family data in the registry. This was crucial to the consolidation phase of the Single Registry, which, in essence, originated from the combination of other databases with distinct, incomplete or outdated criteria.

The DMI was created in 2007 and became the basis for this line of financial support; it remains in effect to this day. The DMI is an index (ranging from zero to one) that measures the performance of each municipality in terms of whether Single Registry records are complete and updated and whether the *Bolsa Família* health and education conditionalities are duly fulfilled.

The municipalities are entitled to an amount based on the index (calculated monthly), in support of the management activities of the *Bolsa Família* programme and the Single Registry. These funds are generally used to deploy and maintain local registration structures and fund various activities tied to active searches, registry updates and communication. For more information about financial support to municipalities, see Law no. 10,836/2004, Decree no. 5,209/2004 and MDS Ordinance no. 754/2010. The states are also entitled to financial support for managing *Bolsa Família* and the Single Registry, as set forth in MDS Regulation no. 256/2010.

Source: Prepared by the authors.

From a normative perspective, it should be noted that the integrated registry should not be regulated by norms lower than those that regulate social programmes, as this would facilitate the denaturing of the original concept in situations where governmental coordination is poor. For example, if a sub-legal norm states that the target population should be the poorest 30 per cent of the population, the registry would be consolidated and widely used as such until a specific social programme is later created by law and sets its own target population as the poorest 40 per cent of the registry population. In this case, by virtue of law, which supersedes the norm that originally instituted the registry, the universe of the registry population would necessarily have to be expanded, without necessarily conducting detailed evaluations on the impact of this change in terms of the operations, financing or targeting of other social programmes.

Adequate standards will not be enough for social programmes to actually use the integrated registry; they must see it as advantageous. As such, the nature of the registry— a database for selecting beneficiaries—must be protected, while it remains permeable to the informational needs of specific social programmes—a difficult balance to strike.

On the one hand, it would not be desirable for a given social programme in need of additional data to have to undertake the same data collection efforts as those carried out under the registry. If additional information is to be collected, this would (ideally) be dictated by the need for additional interviews with—or medical/social assistance guidance or assessments of—the families and individuals pre-selected by the programme based on data from the integrated registry.

On the other hand, the registry cannot meet all the information needs of different programmes, as it serves a wide array of programmes and, as such, must carry out wider data collection efforts than specific social programmes with restricted target populations. The registry should, therefore, focus on a block of common and basic information, at the risk of greatly increasing its operational costs and compromising quality in the collection of essential data.

Finally, integrated registry information must be available to, and meet the needs of, the managers of the various user programmes. This requires a diversified strategy, with significant investments in information technology to ensure that information remains available. To formalise access, partnerships and other types of agreements must be made with regard to the use of data and protocols.

4.2 CITIZENS' PRIVACY AND INFORMATION CONFIDENTIALITY

The Single Registry contains information about the population, and the objective is to make the data available for use by social protection programmes; this makes the issue of information confidentiality a major challenge. After all, how can citizens' privacy be assured when the information must be used widely by managers of several different social programmes?

As we shall see later, citizens in the registry must be aware of what their data will be used for. One way to ensure this is by providing citizens with a proof of registration when they first register, with information about how the data will be used and why. Upon receiving proof of registration, citizens must formalise their consent regarding the use of their data—i.e. give informed consent. This in itself does not prevent misuse, but it does instruct the population about the correct use of data and may help increase control.

The prior, free and informed consent of citizens (who own their data) is internationally recognised as a good practice *vis-à-vis* the privacy and confidentiality of information. It can help protect the managers of the integrated registries from higher pressures to detract from the proper ways to use information, by limiting the scope of information disclosures to what citizens consented to. In other words, political disputes within the State may prompt cases of data misuse, such as police investigations about the population registered for social protection. By making it clear what the information will be used for and requesting the consent of citizens, this kind of political pressure can be mitigated. These dilemmas happen frequently in registries that include the poorest and most marginalised individuals, who are homeless and have had their rights violated but, nevertheless, have the right to access basic policies to ensure their survival and that of their families.

In adherence to each country's individual information privacy and secrecy laws, users of the information collected should be clear about their responsibilities when using the data, as well as the penalties they may incur if the information is abused. It is important that these rules be formalised and agreed on; there must also be systems in place to track users and hold them effectively accountable in cases of data misuse.

Information should not be made available indiscriminately to all professionals involved in the management of the integrated registry, nor to its user social programmes. Instead, data management systems should provide different levels or layers of access, so that each manager can only access the information he/she needs to perform his/her duties. These systems must follow information security rules, given their importance to the country; in that sense, the norms laid out by the International Organization for Standardization (ISO) on the subject can be quite useful. Examples of measures to increase information security include: i) periodic backups to avoid information loss; ii) mechanisms to detect and prevent invasions by hackers; iii) user access control, to ensure that users can only access the layers of information they are allowed to access, as well as to record how and when each person uses the system; and iv) hardware and storage units replicated at different locations, physically or virtually, for recovery in the event of catastrophic data loss.

4.3 ABOUT THE SET OF QUESTIONS IN THE QUESTIONNAIRE

The set of questions used in the integrated registry will be determined by the needs of user social programmes when it comes to identifying their beneficiaries. However, this determination must follow certain guidelines.

First, the registry must contain core information for identifying individuals. The core data comprise information that remains relatively unaltered throughout a person's life, such as name, mother's and father's names, date of birth, and civil registration and identification documents (birth, death, biometrics). The core data enable each citizen to be assigned a unique number in the registry, and the formation of systemic links between these unique numbers and the specific management systems of different social programmes. In that sense, it can be called a 'link table'. In the absence of a unique number for each citizen, the integrated registry's link table enables it to communicate with other pre-existing administrative registries—for example, registries of formal workers or tax information. Such communication can be important for evaluating the reliability of the registry's own data.

Second, there should be a core set of contact information for each citizen, including: addresses, phone numbers and email addresses. The experiences of older longitudinal surveys[17] underscore the need to have this core information facilitate routine updates, to prevent the State from losing contact with citizens, which ultimately undermines the success of registry update campaigns and the management strategies used by social programmes to contact registered citizens. The information module can be made available online, enabling registered individuals to update their data themselves (self-reported); of course, this would require the target population of the integrated registry to have internet access, and there would have to be information security mechanisms in place.

Third, the socio-economic information in the integrated registry about individuals, their families and their households must be of use to social programmes. However, the integrated registry must not be seen as a programme monitoring system; it should contain only the minimum set of information necessary to select the beneficiaries of the various programmes. Although public policy managers and researchers may often want to know a lot more about each individual, the fact that citizens are only asked a limited set of questions helps increase the quality and reduce the costs involved in applying the questionnaire and training registrants. It also reduces the time it takes for citizens to register or update their data.

Fourth, it is important for the questions in the integrated registry questionnaire to match those in the household surveys carried out by the official statistics bureau. This is relevant for two basic reasons: i) official statistical bureaux usually have ample experience in collecting population-related data, have tested the questions with the population and have confirmed that respondents understand what they are asked; and ii) matching questions enable statistical information to be used to validate the data in the integrated registry. For example, one can analyse the behaviour of the answers provided to the same question in both the household survey and the integrated registry, to determine the areas where data collection efforts must be improved.

Fifth, and considering the conciseness of registry data mentioned in the third point and the adherence to official surveys noted in the fourth point, a balance must be struck between including items not necessarily useful to social programmes when selecting their target populations but nonetheless relevant for monitoring the quality of the information in the integrated registry and targeting vulnerable populations with social programmes. Such is the

case of variables, highly widespread and used in the basic characterisation of families, which are tied to concepts used by the official statistics bureau or other relevant administrative databases. Housing data, information such as the presence of elderly citizens in the family or even a simple definition (such as rural vs. urban) are examples of these types of questions, often essential to the monitoring of social programmes. It is also sometimes necessary to include questions in surveys, censuses or other administrative records that may be unusual but are nonetheless important to the country's social protection policies. This is the case, for example, when identifying certain communities, ethnic groups or other population groups, such as those who are homeless or those whose rights have been violated, which are not commonly identified in other surveys and are subject to severe poverty or social vulnerabilities.

BOX 3
A conceptual adherence issue: the Single Registry and the BPC (Continuous Cash Benefit)

As mentioned in Box 1, the BPC is a minimum allowance (USD300) paid to elderly people or those with disabilities with a per capita household income up to a quarter of the Brazilian minimum wage (USD75). It was established in the 1988 Constitution and is of paramount importance for non-contributory social protection; it is paid to almost 4.5 million people (July 2017), out of an annual budget of more than BRL45 billion (USD14.5 billion).[1] The registration of BPC beneficiaries has been, and still is, historically conducted by the institute responsible for the granting of retirement pensions and allowances. BPC beneficiaries are enrolled in the *Cadastro Nacional de Informações Sociais* (CNIS—National Social Information Registry).

Due to the similarity of the target populations, and to include BPC beneficiaries in the municipal social assistance networks, since 2009 the MDS has been following the guideline to enrol them in the Single Registry. In 2016 this procedure became mandatory for revision of the allowance, as well as for new enrolments. Initially, no sanctions were enforced if beneficiaries failed to enrol—i.e. there was no impact on the granting or maintenance of the allowance. However, because of the unsatisfactory registration results, since 2016, suspensions have been established for those who do not register; thus, enrolment in the Single Registry has become a requirement for the granting of new benefits. Although it is a requirement, information from the registry cannot be easily used for the selection of BPC beneficiaries, for an apparently simple yet crucial reason: the concept of family used by the BPC (nuclear unit/civil family) is different from that used by the Single Registry (household/consumer unit). This specificity of the concept of family means that the Single Registry, which was redesigned between 2009 and 2010 after the establishment of the BPC beneficiary enrolment guideline, uses approximation to determine per capita household income.[2] Therefore, there was room for the registration of family components to be defined in such a way as to enable the use of the Single Registry, but even though the two processes were managed by the same ministry, this dialogue lacked the necessary precision, and the mismatch in registering family components remained. As changes in the structure of the Single Registry are very costly from a financial and operational point of view, this barrier is likely to persist until the next revision of its enrolment form, still unscheduled.

Source: Prepared by the authors.

Notes: 1. Data from the National Secretariat for Social Assistance of the Ministry of Social Development.

2. Mation and Santos (2017) established an algorithm with 176 rules to match Single Registry family members to BPC family members. With this, they achieved 91.9 per cent effectiveness, failing to reclassify 8.1 per cent of the people included in the former for recalculation of per capita household income according to the family criterion of the latter. In addition, among the 91.9 per cent reclassified enrolments, there is still a 0.4 per cent error due to estimation of household positions. Despite encouraging results, such imprecision can generate unnecessary duplication of work and lawsuits. In addition, it will require the development of information technology susceptible to errors.

Sixth, when the set of socio-economic data is first defined, it should be checked whether the concepts adhere to the selection criteria used by social programmes. It should be determined whether selection criteria that appear to be the same are, indeed, the same or different. And, if they are different, whether they can be unified or whether the way the integrated registry collects the information should be made more flexible to encompass

distinct concepts used by various programmes. Sometimes, social programmes will define their target populations using the same signifier, but with different meanings. Income, family and physical disability are examples of basic concepts whose meanings may differ from one social programme to the next. Such verification may seem elementary, but if it is not done in a timely manner, it may lead to a duplication of work or even render the registry unusable by the social programmes that should be using it.

Seventh, the mandatory documentation required from people at the time of registration should be sufficient, but not a basis for exclusion. That is, identification documents and proof of declared socio-economic conditions are important both to ensure that each citizen is registered only once and to contribute to the reliability of the information in the integrated registry. However, it is not mandatory to submit documents that are not widely accessible to the population to be registered, at the risk of preventing them from enrolling, thus causing serious exclusion mistakes. In contexts in which even the most basic civil documents are inaccessible to the most vulnerable members of society, it would be best to establish ways for them to obtain such documents in combination with the registration. One possibility would be to conduct documentation campaigns in places where the target population of the integrated registry is concentrated; another would be to set up documentation offices in the same places where registration will take place, or nearby; and yet another key measure would be to provide documentation free of charge for the purpose of unified registration.

Eighth, it is important to provide families with proof of registration—i.e. a document that certifies that the family has been registered, informs them of the objectives of the integrated registry and the use of the information and formalises the family's agreement with this. If possible, this document should contain basic data, such as date of registration or any changes and additional information essential to participation in social programmes.

Finally, ninth, despite wide participation in household surveys in the country, it is important to test the integrated registry's questionnaire with a sample of the population that wishes to register. Testing with a representative sample can be very expensive and unfeasible for the country, but it can be done with a non-representative sample, composed of subgroups of the population to be registered that may present differences in interpretation of the registration requirements (for example, urban populations and rural populations).

It is best for the test to be done by those who will also be performing the registration, or at least by people whose profiles are similar and who have been trained. Thus, not only the registration form but also the content of training will be assessed. In addition, the pre-test should indicate the average time spent on each item of the questionnaire, allowing a cost–benefit assessment of each question, section and dimension surveyed. Knowing the costs and benefits of each question leads to greater bargaining power with the social programme managers who have requested the information.

Wherever data collection is carried out by subnational governments, they should participate in the design of the integrated registry's survey. In addition to ensuring that it is adapted to the local context, this can increase the legitimacy of its development at the subnational level, ensuring greater support for its implementation.

BOX 4
Availability of Single Registry information to registered persons

For more than 15 years, the Single Registry had the following limitation: only the families under the *Bolsa Família* programme were sure that they were actually registered, and only the female heads of households under this programme knew their Social Identification Number (*Número de Inscri*ção Social—NIS), assigned by the registry to each person enrolled. The other families received an enrolment slip when they registered.

However, as the enrolments in the Single Registry, until its new version implemented as of December 2010, were made offline and then sent online to the national base, people were not sure that the completed form had actually been transferred to the system and did not know their NIS. This was not a big problem until 2011, since few social programmes used the Single Registry. However, with the great expansion of its use after that date, this lack of information for families became a major hindrance for them and for municipalities. Social programmes often required families to submit proof of enrolment to participate in them, and to obtain this proof, the female head of the household had to go to a municipal registration facility and request this document, which entailed transportation costs for poor families and overcrowding at the facilities.

The federal management of the Single Registry followed a guideline to address this issue through an online consultation module, but due to technological limitations and issues around the legality and risks of making these data available, the solution was only implemented in 2017, with a citizen consultation module.[1] It allows a person to access his/her NIS and that of each person in the family by providing basic identification information, and to obtain a slip that contains their basic registration data generally used for selection by the social programmes, such as household members and per capita household income.

Source: Prepared by the authors.

Note: 1. The citizen consultation module can be accessed at <https://aplicacoes.mds.gov.br/sagi/consulta_cidadao/>.

4.4 DATA COLLECTION AND UPDATING

Just as important as defining the set of survey questions is establishing who will collect the data, when and how. As seen above, data can be collected by the central government, subnational governments or other agents that collaborate with them. In all cases, the data should be collected by professionals properly trained to interview the families, since the questionnaire is key to ensuring the integrated registry's data quality. Therefore, it is crucial to provide appropriate training for this activity, which can be conducted face to face or through distance education, and ideally some type of formal certification should be required. The training and certification information should be recorded in a specific system to assess the cost–effectiveness and coverage of the training strategy.

If the strategy is to collect and update data continuously—that is, if new registrations or updates are to be entered in the integrated registry at any point in time—the training model will also need to be continuous, to ensure access to training for all professionals, especially in the case of high turnover in the data collection teams. Moreover, the collection of reliable and up-to-date information on the education level, types of contracts, remuneration and turnover of the workforce that conducts the registration is crucial for designing an effective training and human resources policy. Minimally, basic training should provide guidelines on how to treat people when applying the questionnaire (with respect, objectivity and impartiality), conceptual explanations on all items of the questionnaire and guidelines for filling it out correctly.

The questionnaires can be filled out on paper and then entered in the system, or directly typed into the system. It is likely that conditions in some countries will require filling out

paper forms. However, this is to be avoided as much as possible, because collecting data on paper: i) increases the possibility of information errors, since the forms are filled out without confirmation or inconsistency checks embedded in the system, and generates another stage for entry errors when transferring data from paper to the system; ii) increases the costs involved in data collection; iii) makes the registration procedure more time-consuming (paper filling step plus the system filling step); and iv) requires space for storing and filing the completed forms.

If the country has a suitable internet infrastructure, questionnaires can be completed directly in an online application, making registration virtually immediate. In the absence of such infrastructure, however, an application form can be developed for entering and storing data offline, which may subsequently be transferred online to the national database. In most cases, it is best to employ a mixed strategy, with offline and online data registration, to account for local specificities, as well as possible systemic problems, thus enabling uninterrupted assistance to the families.

As a rule, the literature on integrated registries identifies two basic ways to collect household data: on-demand registration and the census approach. On-demand registration occurs when a household's representative goes to a registration office to enrol. In the census approach, public authorities define a geographic or demographic area in which all households will be visited for data collection.

Here, we chose to address two types of registration strategies: i) on-demand registration, in which it is up to the family to seek enrolment in the registry at registration offices; and ii) registration by active search, in which it is up to public authorities to identify households for registration. Thus, the census approach is one of the ways to reach families to be registered—that is, one of the types of active search. Another way would be to establish registration campaigns in the neighbourhoods or places where the families live, or to establish channels for NGOs and other agents to notify the State of people and families who need assistance.

The operating cost of on-demand registration is usually lower, since people who do not fit the profile defined for the integrated registry tend not to seek it; thus, public authorities spend less by registering mostly those with the required profile. However, as the poorest and most vulnerable people have less access to public-sector information and greater mobility constraints, they might not believe that they can access certain social policies, or they might not know that they can register and where they should do so. This risk is significantly reduced in the census approach (Castaneda and Lindert 2005) and in registration campaigns.

The census approach is the registration modality that generates the highest quality and comprehensiveness in data collection in the defined geographic area, since, as it is conducted in the home, some of the questionnaire fields are likely to be filled out more reliably thanks to the interviewer's observation, and all households are likely to be registered. However, it is more difficult to update information, because a registered person can only do so when contacted by public authorities. Moreover, since the cost of the census approach is not low, it is unlikely to be implemented annually. Although their operational costs are lower than the census approach, campaigns do not make updating easier.

Both the active search and the on-demand registration strategies have advantages and disadvantages. The active search strategy greatly reduces the possibility of omitting precisely the most vulnerable individuals. However, updating information is more difficult, which

prevents the identification of negative or positive economic impacts on the families, and those who moved to the geographical area in question after the date of registration are left out.

On-demand registration does facilitate the updating process but also tends to leave out the poorest families residing in locations far away from registration offices, especially if it is not coupled with a major communication strategy to reach the vulnerable population. Furthermore, it is possible that people do not have an incentive to update positive socio-economic changes, as this may lead to being cut off from certain social programmes. In this case, public authorities need to be more active in updating the data, and, rather than choosing one registration strategy over the other, countries' experience has indicated that it is best to use both.

For example, the census approach or campaigns can be used in places with a high concentration of families to be registered, and fixed registration offices can be established in places where the concentration is smaller. It is also possible to carry out registration through household visits in a non-census manner—i.e. by choosing which households to visit: the poorest ones, those with people with disabilities, those with indications of having provided false information or whose information when cross-referenced with other databases indicates that they are no longer vulnerable, among others.

Regarding registration offices, it is important for them to open at times that are accessible to the population that wishes to register. For example, if the most vulnerable population is mostly at work during weekdays, a good idea would be to also open the offices one weekend a month. In addition, it is important to ensure that the population can register or update their information at any registration office, thus reducing access barriers as much as possible. Many people find it more convenient to go to an office near their place of work, for example, and not near their home. This alternative should be provided to minimise registration costs for citizens.

The frequency of updating data should be established by each country, according to their needs and operational and technological conditions. Important points to consider are: i) what is the trend of changes in the variables collected over time; and ii) how important are such variables to the implementation of social programmes and the monitoring of beneficiaries. For example, if the household address tends to change every two and a half years and is an important variable for social programmes, it will probably be detrimental for the registry to be updated only every four years.

Whatever the country's choice, it is clear that, for the registry to reach people and be updated, it is crucial for the public to be properly informed about who should register and for what purpose, where they can do it, which documents they should submit and when they should update the data. To this end, it is important to set up a communication strategy between local agents and families.

It should be mentioned that registration updates can also take place when citizens contact the programmes that they wish to participate in. This is a time when procedures can be established for certain registry information to be updated for all programmes, taking advantage of each of these entry points to update the information. As an example, in the current phase of development of the Single Registry, it would be possible to design bidirectional flows for updating the registry through the entry points of the user programmes, since the updating mechanisms specific to the Single Registry are becoming increasingly costly, due to the registry covering 40 per cent of the Brazilian population.

Data collection by agents of the user programmes, which are not under the Single Registry's centralised management, can be an important strategy to distribute and reduce, at least partially, the burden of updating the registry. For example, a user programme such as the Social Electricity Tariff,[18] which today serves about 9 million households, operates with enormous capillarity and rigorous collection of address and georeferencing data. This potential can be used in favour of other social protection policies, but its feasibility necessarily requires an analysis of the challenges in standardising data collection by other entities, to prevent loss of information quality.

Finally, some countries also conduct systemic updating of some data groups— i.e. updating the data in the integrated registry based on the updating of other administrative registries systemically linked to it. A simple example would be the exclusion of people from the integrated registry based on notification of their death provided by the national system of deaths, as in the case of the Single Registry. The usefulness of this kind of updating, however, is based on three premises: first, sufficient quality of the database used to update the integrated registry; second, a very small likelihood of errors in the information or the number of homonyms; and, third, in case of error, the citizens affected can easily correct the information and avoid negative impacts.

4.5 VALIDATION OF THE REGISTERED DATA

The data in the integrated registry can be validated as they are entered into the system, avoiding information inconsistencies usually due to typing errors. Checks can be established between the registry's internal information or based on external information.

In the first case, the system will not accept an entry that conflicts with information already entered. It should be prepared, for example, to prevent entry of information regarding a certain level of schooling incompatible with the person's age, or registration of children for a person who reported having no children. These checks in the system will be defined at the time of its specification.

In the second case, the integrated registry system proposes the correction of a typed item based on information about this same item in another database. For example, if the country has an excellent database of addresses, schools or civil documents, they can be compared upon data entry, also as a means to support and simplify this process. Depending on the country, this can be done online or by loading auxiliary tables with this information within the registration system. The online service, also called 'web service', is more effective, but it is expensive and requires more connectivity. The second method for importing data is cheaper and requires less connectivity but requires regular updates of the integrated registry application to update the table; after all, from time to time, these tables will have to be reloaded into the system. In general, the auxiliary tables are more useful for a 'combo box' type of field, which provides pre-set options to be selected by the user.

In principle, checks at the time of data entry can also be established based on socio-economic information, such as job or monetary income. But these data may be subject to sudden changes, so it is preferable to use them to validate the statement made to the integrated registry, when citizens can confirm or validate the information at the time of registration. Otherwise, the registry might use outdated information registered in another database, causing technical errors that will be detrimental to the quality of the registry and produce exclusion and inclusion errors in social programmes. By choosing as registry

quality parameter a base that is not representative of the current condition of the registered people, thus preventing entry of more current information in the registry, public authorities limit information on any socio-economic improvement that would result in a person exiting a social programme. Even worse and more unfair, people who have recently come into a certain condition of vulnerability or poverty are prevented from participating in the social programmes to which they would be entitled.

In addition to validation at the time of entry into the integrated registry system, the data can also be validated after they have been entered, through periodical cross-checking with other administrative registries. For some countries, it may be legally feasible to compare the data from household surveys to those from the integrated registry. As household surveys often collect good-quality data, this would be a real improvement in the quality of the registry.

What we need to keep in mind is that although it is very useful, using information from other databases to assess the reliability of information in the integrated registry entails two conditions: i) that the other sources are, in fact, of a higher quality than the integrated registry, as regards the data to be validated; and ii) that they are updated at a similar frequency as the integrated registry, because there is no point in comparing data collected at very different times. The absence of these two conditions opens the possibility of major technical errors and many injustices against vulnerable citizens.

BOX 5
Cross-checking the Single Registry with other administrative registries

Since 2005 the Single Registry has been cross-checked offline every year with other administrative registries to verify the income declared by registered people. Since then, the methodology for matching with other databases has evolved greatly, as have the calculations made to decide whether there is any divergence with the information registered. On the recommendation of oversight bodies, between 2009 and 2010 the national management conducted a broad investigation, based on cross-checking with various databases, such as the National Registry of Motor Vehicles (Renavam). To this end, the municipalities updated the data on families in the Single Registry that were identified as owners of vehicles registered in Renavam. This effort revealed that most indications of ownership were not true. In general, the identities of citizens registered in the Single Registry were being used by third parties for registering ownership of goods and vehicles, without their knowledge. That is, vehicles were falsely registered in the name of people registered in the Single Registry to hide the true owner—a recurrent tax fraud in Brazil.

The great investigative effort made by local agents taught the federal management a lesson: for this type of validation, it is necessary to use administrative registries that are more reliable than the Single Registry. However, in later occurrences, the Single Registry was again compared by oversight bodies to databases whose quality had not been previously assessed. As these bodies determine that the people identified through this procedure must have their socio-economic condition reassessed *in loco*, the federal management is obliged to do so, even when it is certain that this is not cost-effective. Suspicions are raised about the poorest people and about the quality of the Single Registry, requiring an extra effort of organisation and monitoring of the activity by the federal management and updating of the registry by the municipalities, even though, in the vast majority of cases, the irregularities are not confirmed.

This type of occurrence raises the need for broader debate on the certification of administrative registries or, in other words, joint examination of the quality of such registries by the public authorities and a decision on which of them may be considered adequate for assessing which type of information. Moreover, since offline cross-referencing is very costly for the federal management, as it involves databases with very large volumes of data, another important discussion would be whether to integrate the databases online, allowing for lower costs and speedier comparisons. Neither discussion, however, has come to a satisfactory conclusion or has presented any concrete results thus far.

Source: Prepared by the authors.

4.6 TECHNOLOGICAL COMPONENTS OF THE INTEGRATED REGISTRY: A MANAGERIAL PERSPECTIVE[19]

The dimension of information and communication technologies (ICTs) deserves a lot of focus during the development of the integrated registry: it requires hardware with memory and processing capacity to support the registry's transactional and storage needs, and agile and simple software that is intuitive and user-friendly. Furthermore, systems must be specified very thoroughly—i.e. with a detailed design of the road map that defines what the systems should do, how they should do it, and what validation criteria must be established to verify that they are working properly. Very modern software will be wasted if poorly specified, and will generate frustration on the part of public policy managers with the results of the systems, due to errors, lack of functions or slow data processing, among other reasons. There are several ICT systems that can comprise the operation of an integrated registry. In basic terms, the following must be in place:

- a transactional data entry and validation system with an interface for authorised registrants to enter, modify or delete information;

- a repository (single database or multiple connected databases);

- a system for registering and controlling users and access;

- systems for consultation and transfer of registered information, either to be consulted by registered citizens, to obtain managerial information from the central management of the user programmes or for services that transfer data safely on demand by the management systems of the user programmes; and

- consultation, complaint, correction and reporting systems available to all citizens, operated online, by telephone or recorded *in loco*.

The professionals who specify the software will not be, as a rule, the same ones who work on the day-to-day management of the integrated registry. Therefore, for software to be well characterised, two guidelines are important. First, the professionals who specify the systems need to have extensive contact with the team responsible for managing the registry. In general, conducting interviews with the managers of the systems is a necessary but insufficient condition for specifiers to understand the system's goals and actual management needs. Therefore, it is also suggested that those responsible for specification should participate in the day-to-day management team for an appropriate time. Second, the entire system specification needs to be documented sufficiently and clearly, so that turnover in the system's maintenance teams will not generate instabilities in its operation. The documentation of system versions must be strictly controlled, ensuring traceability of system changes to avoid duplicating work and overpaying developers.

If the registry's information collection system is fed by subnational governments or decentralised networks, they should be asked to participate in its construction, thus contributing to the quality of the data collection software design, as already suggested regarding the definition of questionnaire items.

Finally, mechanisms must be designed in advance to monitor the functioning and appropriateness of the software and the business rules of each of its functionalities. Efforts to monitor the system's operation or failure, such as robots, connection speeds (pings) and a simple call centre connecting to the local manager, allow the speedy detection of problems in new and old system routines.

BOX 6

Provision of Single Registry information to social programmes

One of the biggest challenges facing the Single Registry today is the lack of secure and dynamic services for providing its information to user programmes. Despite huge advances in coverage, collection standardisation and registry quality, updating and reliability—in a country of continental proportions—the Single Registry's integration with more than 20 programmes that use it is still unsatisfactory, except for *Bolsa Família*. Very few data transfers occur automatically, and data files are made available on demand in batches or in pre-formatted files made available in a specific portal (the Single Registry Network). Countless possibilities are relatively easy to develop for the Caixa Econômica Federal, a public bank that is the leading provider of information technology for the Single Registry as well as its operator. These include web services that provide the results of individual queries in real time to the systems of the user programmes, and automatic extractor services (virtual private networks—VPNs), among others. Ideally, many services should be available to meet the specific needs of each service and network of user programmes.

Precisely because of the lack of appropriate instruments to transfer information, many of the Single Registry's user programmes adopt practices detrimental to the main purpose of the registry, such as asking citizens for proof of registration on paper or collecting information that has already been collected. In these cases, the Single Registry represents an additional step for access to a benefit—not a step less, as it should be. To correct this situation, it is necessary for the national administration of the Single Registry to have a strong political mandate to make the user programmes use the registry's information, in addition to ensuring that information transfer tools meet the needs of its user programmes.

Logically, in the case of changes in information already collected, as well as supplementary information that the Single Registry does not contain, the user programme must perform a new collection. However, if the aim is to check, cross-refer or jointly analyse information in the systems of the user programmes with the integrated registry, in a large SIIS (for example), an effort should be made to establish conceptual and collection standards, with criteria banks and metadata agreed on by the participating systems.

Source: Prepared by the authors.

5 TRANSFORMING THE DATA INTO INFORMATION FOR THE PURPOSES OF MONITORING THE INTEGRATED REGISTRY AND SOCIAL PROGRAMMES AND THE CONSTRUCTION OF AN SIIS

As seen in the previous sections, to be dynamic and function properly, an integrated registry needs to be useful to the social programmes that use it. In other words, the collected data set needs to provide easily accessible information to the managers of specific social programmes for the purposes of operation, monitoring and evaluation. If the country chooses to build an SIIS that integrates information from social protection programmes, or that also incorporates public policy data from other sectors, proper use of the integrated registry items will also be essential.

According to Di Virgilio and Solano (2012), monitoring and evaluation are part of the life cycle of a social intervention. Monitoring is a continuous and ongoing activity, carried out throughout the intervention, aimed at verifying the extent to which the planned results are being achieved. Evaluation is a single specific activity designed to measure the performance of a given intervention.

In the literature on monitoring and evaluation, frequent debates have failed to set the boundaries between monitoring activities and process and result evaluations. This is a debate that we are not going to pursue here because, for the purposes of understanding use of

the integrated registry for monitoring and evaluation, the main driver is the understanding that it is used to design processes and produce indicators that will be useful for monitoring and evaluating the social protection programme(s) being implemented, especially if they include, in addition to information on programme beneficiaries, non-beneficiary individuals and households with similar vulnerabilities. Before that, the data in the integrated registry should be transformed into information that enables monitoring and evaluation of the registry itself, with useful information to supervise the quality of the data collected regarding the consistency, reliability and updating of the declared information, such as evaluating the registry's management (i.e. whether it is operating as expected). An example is the internal controls and user records of the data collection system: these are important functionalities, both to generate indicators and studies on service provision and workforce and to make the system reliable in terms of traceability of suspicious operations.

Whether intended for the monitoring and evaluation of the registry itself, of specific social programmes or for the construction of an SIIS, the proper use of the integrated registry for these purposes will depend on the design of appropriate indicators, built according to the design and the goals of what is to be monitored or evaluated. Therefore, it will be easier to develop a good set of monitoring or evaluation indicators if this is preceded by the construction of a logical framework that specifies the objectives of the initiatives, inputs, outputs, results and expected impacts.

5.1 INFORMATION FOR MONITORING AND EVALUATION OF THE INTEGRATED REGISTRY

As we have seen, the integrated registry requires software that transforms collected data into information that is useful to its managers. The content and the way in which such data should be made available will be defined according to the needs identified by the registry management team, but basically the data must allow managers to easily and quickly assess whether the processes involved in the registry are running properly. It will be necessary to build indicators on the profile of the registered people and families, as well as on the processes that make the registry work, such as by systematising data on those responsible for collecting data and their training, and budget execution, among others. They should allow for the identification of possible problems in data collection and information processing by the integrated registry, such as enabling managers to anticipate issues related to the registry's management that need to be addressed before they become a problem.

Examples of useful questions for monitoring and evaluating the integrated registry's processes include: Are the data collected in the survey complete? Are duplicate identities being identified? Has any inconsistent information been identified in the integrated registry itself or based on cross-referencing it with other databases (if any)? Are the data on the families within the parameters adopted for updating? Which families have outdated data, and which will become outdated in the short term? How many and which families were registered or had their information updated within a certain period (last month or year)? Is the number of people and families registered as expected? Is the number of registrants for each location adequate? Have they all had appropriate training for data collection? It is important for information to be available at levels of disaggregation that show whether problems or inconsistencies are, for example, concentrated in certain localities. It is also important that data can be disaggregated at the household and individual levels, so that any inconsistencies found, such as documentation errors or duplicate registrations, can be addressed.

FIGURE 3
Example of the main and auxiliary system components of an integrated registry
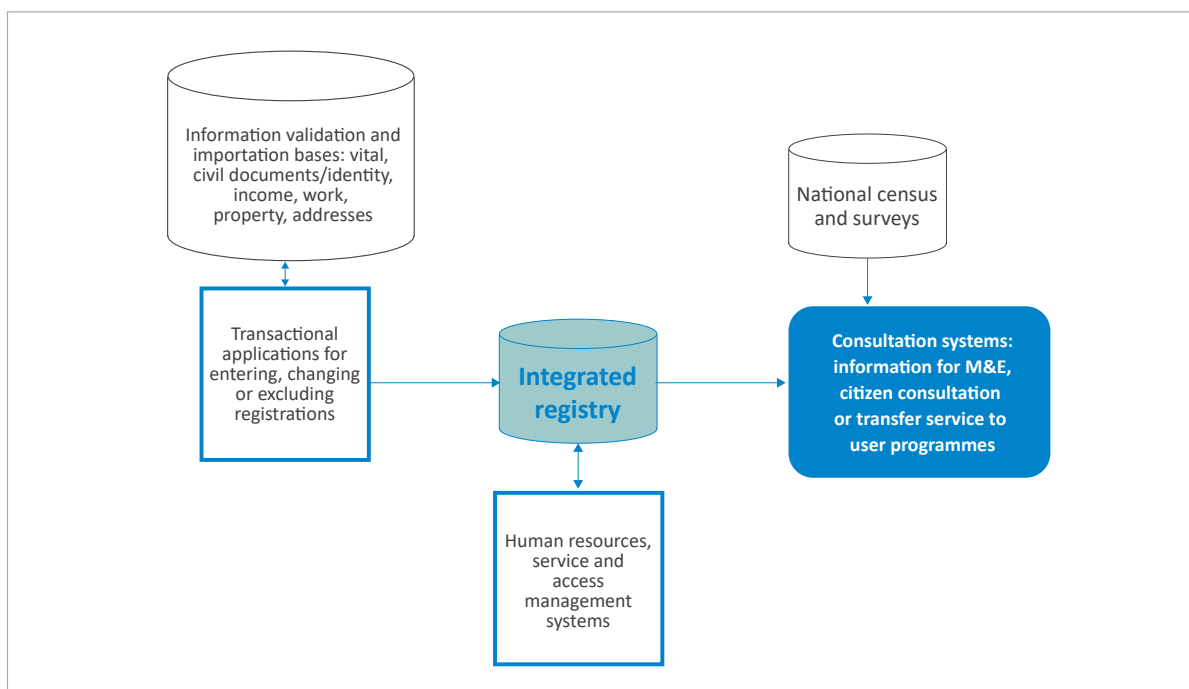
Source: Prepared by the authors.

Aggregate information on the characteristics of the registered population is also important to monitor data reliability, since, as previously mentioned, it can be compared to information made available through official statistical institutes, allowing the evaluation of discrepancies that might indicate problems in data collection.

5.2 INFORMATION FOR THE OPERATION, MONITORING AND EVALUATION OF SOCIAL PROGRAMMES

We have seen that an integrated registry is not the specific management system of a single social programme and, therefore, should not be expected to contain all the data necessary for its operation and monitoring. However, a useful integrated registry will contain data that allow social programmes to better select their target population, and may provide all the necessary data for selection, or at least the most relevant data. For its operation, the social programme will require part or all of the core personal identification data contained in the registry: the link table. A specific social programme management system will also be coupled with the registry data that allow the identification of changes in the characteristics of the person or family and that modify the participation status of the person or family in the programme. This may lead, for example, to increases in the amount of benefits paid or to entry into or exit from a particular programme.

In relation to monitoring and evaluation, the indicators built from the registry should meet the information needs set out in the logical framework mentioned at the beginning of this section. In the case of cash transfer programmes, they should meet the following subsets of indicators, developed based on the registry and supplementary data from the programme's operation, contained in its specific management system, as described below:

- Indicators on beneficiaries and their payments: information on the number of beneficiaries, transfers of funds made by the programme (overall value, by location, by family, by ethnicity, direct or indirect beneficiaries, place and date of grant withdrawal, with the possibility of examining the frequency of withdrawals far from home etc.), status of the person's and family's benefit (e.g. whether the benefit has been suspended for failure to comply with any rule, whether it has been increased or whether the family has been disconnected from the programme) and the programme's coverage in relation to potential beneficiaries identified in the registry, if it contains this information

- Indicators on human resources and social programme infrastructure: data on staff (number, educational profile etc.) and the equipment involved in management (number of paper forms used by locality, number and characteristics of computers used, internet access by locality), productivity data or staff audit, such as number of benefits changed per operator, number of benefits granted over a certain amount per operator, benefits granted to operators or their relatives etc.

- Indicators on process evaluation and case follow-up: aimed at examining whether the programme is operating as planned. Examples: Do beneficiaries update their registrations on time? Have they complied with the programme's rules, such as compliance with co-responsibilities?

The registry's data are also important for developing impact assessments for social programmes, which will indicate whether a programme changes people's lives and to what extent, because it is these data that will allow the identification of groups of participants and non-participants that have similar characteristics and can be compared to identify the effects that programme participation causes in their lives. The impact assessment will have a first round (baseline) and subsequent rounds, for which the registry update level becomes essential. For example, with very outdated addresses, a significant number of families that participated in the baseline are lost, impairing the quality of the other rounds of the survey and, therefore, its results.

The integrated registry and the beneficiaries of a social programme can be cross-referenced with other administrative registries to compile statistical analyses that allow, through a comparison between similar groups, inference of any changes in people's lives related to participation in the social programme under evaluation. That is, it enables methods and control groups to be matched to estimate the impacts of public policies.

5.3 CONSTRUCTION OF AN SIIS

The SIIS is, by definition, an information system that allows monitoring and facilitates evaluation of a group of public policy beneficiaries. The existence of an integrated registry, shared by several social programmes, facilitates this task, since it provides a single identification data core, enabling the establishment of links between the databases and comparability among the target population. However, the registry does not reach the goal of comprehensive and cross-sector analysis of the programmes offered: the system that achieves this goal is the SIIS. It may also include databases of social programmes or other initiatives not using the integrated registry, but to do so, these databases need to share a minimally common core of citizen identification (link table).

The more social programmes and policy sectors are involved in the SIIS, the better the potential results for integration and monitoring of the initiatives, as well as for the service provided to citizens. Moreover, integration of information from official statistical institutes—including in the SIIS—allows the system to function not only as a tool for monitoring and evaluating integrated social protection but also the country's social situation. This makes it easier to keep track of changes in the country's socio-economic context that can have a bearing on social protection initiatives.

Attention should be drawn to some of the steps involved in building an SIIS that can potentially monitor and evaluate the social protection strategy. First, a good deal of government coordination will be needed to promote information aggregation and coordination for the global use of the SIIS. According to Azevedo, Bouillon and Irarrázaval (2011), coordination was one of the major obstacles to the appropriate use of the SIIS for monitoring and evaluation purposes in Latin America. In public policy contexts marked by fragmentation, political support may be required to legitimise the SIIS and foster interest among the sectors involved.

The second step is a detailed examination of each database. The integration of information systems of various social protection programmes, and their integration with official statistics, requires the harmonisation of essential concepts such as family, household, addresses and territorial units. Thus, it becomes feasible to examine and plan key aspects, such as coverage and targeting of initiatives, at a level of disaggregation that is relevant for public policy. National coverage of a programme may be adequate, but local coverage may be completely wrong; improved targeting may be necessary in urban regions but not in rural areas, and so on. By including numerous partners, objectives and information in an SIIS, the metadata—i.e. the information about the data, their precise conceptual definition, sources, temporality, method of collection, derivation or calculation, among others—become almost as important as the data. They are critical to reduce misuse of information, and much more relevant in environments that serve multiple (and sometimes conflicting) interests.

Therefore, the examination of each system must focus on an analysis of its content and characteristics—i.e. concepts behind the variables that comprise the information; the manner and frequency with which data are collected; the quality of the collection process (Who collects the data? Are they trained to do so? Does the data processing system allow for inconsistencies?); the reliability of the data collected; and technological characteristics of each system integrated with the SIIS. If these systems are not yet fully documented, it will be a good reason to induce their managers to adequately prepare the documentation. This examination is required for a third aspect to be effectively carried out—namely, the definition of which data from each system should form the SIIS, and which indicators it should contain. These indicators can be used to monitor and evaluate programmes in isolation or as a whole, and can be built from a single system or from integration among systems, according to the goals of whatever is to be monitored. In this regard, attention should be drawn to the importance of building a concise and useful set of indicators, since there is no point in an extensive list of indicators that will not be used.

A fourth item is the definition of information exchange and secrecy protocols. The protocols formalise the responsibilities of managers in information transfers and use, covering flows, frequency and secrecy rules. The latter, as seen in the sections on the integrated registry, should be clearly formalised, not only among the managers of the databases that make up the SIIS but among all the users that will access the system's identified information.

Fifth, it should be noted that an SIIS tends to be costly, and international experience shows that countries often rely on external funding to build it (Browne 2014). This is largely due to the need to procure or develop ICTs that allow information storage, processing and availability.

Sixth, for an SIIS to fulfil its monitoring and evaluation potential, the system must be carefully specified, and integration between the software specification teams and management teams is essential for its proper design and dissemination. For example, it needs to store historical information—at least the changes in the data used to build the system's indicators—since this is the only way to compare the current with the past situation. It is also suggested that the SIIS be developed in modules, so that changes in specific programmes or even database additions can be easily incorporated into the system (Villalobos, Blanco, and Bassett 2010).

Finally, a seventh aspect concerns the system's usability. The tool for accessing the indicators needs to be user-friendly and to provide a dictionary of the system's indicators. Training for the use of the system must also be designed with a view to the country's possibilities (online training, face-to-face training or both) and the turnover of its users, which, if significant, requires constant or very frequent provision of training.

6 FINAL CONSIDERATIONS

International agencies and experts engaged in the production and exchange of knowledge about social protection policies, especially those that address the poorest people, usually favour aspects related to the theoretical design of policies: their target population, targeting method, benefit package, delivery chain, monitoring and evaluation and, in particular, their impact on lasting poverty reduction—i.e. the so-called 'exit points'.

However, the situations of vulnerability are too complex to fit perfectly within theoretical models, and the operation of public policies is permeated by more drivers—interests, reasons and morals—than can be grasped by the rules. Thus, although the theoretical design contains inclinations regarding more or less coverage, protection, respect for citizens and justice, among other precepts, it seems to us that the final result will also be determined by characteristics of the operation of such policies, usually neglected in the existing literature about the subject.

The integration of social protection policies is one of the most important challenges of state action. Policies need to act together if they are to tackle the complexity of real situations of vulnerability. Poor citizens suffer numerous privations, lacking access to decent housing, drinking water, quality education, comprehensive health care, electricity, consumer goods, justice and security, among others. Access to and the quality of public policy, at the minimum or universal levels of citizenship established by a nation, can only be monitored if the innumerable operational challenges are met to integrate social policy information. Furthermore, equity in state action can only be properly assessed and improved if social policy information is analysed alongside other information, such as about labour, income, property, taxes, waivers, credits and subsidies.

Through the experience of the Single Registry, we have discussed some of the essential aspects for integrating social protection policies. Having done this, we can outline two major levels of integration. The first is the integration of basic information on people, families and households who experience vulnerability and desire access to social protection policies.

It is thus an integrated registry of candidates, whose information is comparable because it is based on a common set of concepts, collection instruments and interview practices. Whether collection is carried out by a single entity, different from those who directly manage the social protection programmes, or by the programmes themselves when citizens seek them, what matters is to collect information that is complementary without duplicating efforts, saving the time and resources of the State and its citizens.

The second level of integration, called an SIIS, involves information from the programmes and information from the integrated registry, as well as census and other information from official statistics agencies. Brazil does not yet have such an instrument, which would allow a broad view of the coverage of social protection policies as a whole, identifying gaps, juxtapositions and overlaps. This overview is essential to assess the reach of the joint activities of the State and its effective participation in social life; in addition, an SIIS, if based on an integrated registry, will provide data on gaps or overlaps in coverage with names and addresses—i.e. precise information for immediate state action. This is not the approximation of a survey, which produces estimates of population not covered in a given territory, for example.

In concrete terms, the structure of an integrated registry enables the coordinated operation of policies targeting the most vulnerable population. Ideally, as a registry, it should contain information on each vulnerable person, family and household, enabling the State to come into direct contact with vulnerable citizens. As an integrated registry, it should be a harmonised, synchronised and reliable repository of such personal information, reducing the need for new collections and promoting use of the most current information.

The task at hand will be greatly facilitated if the country has a single and reliable system of civil registration or citizen identification. A single identification number and a nationally consolidated source of birth and death records will facilitate the linkages between information collected at different entry points or at different times. Otherwise, the integrated registry itself must establish a reliable algorithm to make this linkage and uniquely identify a person, generating a single identification number that makes things easier for citizens and programmes.

Throughout the text, we have discussed some of the operational, institutional and normative aspects of an integrated registry: i) the need for and challenges of intra- and intergovernmental coordination; ii) privacy and the confidentiality of information declared by citizens; iii) the description and analysis of the items that must be covered in the integrated registry's questionnaire; iv) registry information collection and update models; v) procedures to validate and check the information collected; and vi) some of the technological components essential for the registry's operation. Although we have delved into these topics, each of them presents a high degree of complexity and deserves more focus in further studies. For the time being, the aim was to outline this complexity and draw attention to practical details that, while sometimes overlooked, in our view, may determine the final outcome of a public policy understood in all its contradictions.

An integrated registry system can ensure the inclusion of citizens in more and better social protection programmes to which they are entitled, without compromising transparency, republicanism and compliance. However, an integrated registry can also, at local or national level, be used for purposes of exclusion, patronage, persecution and the recurrent bias of criminalisation of poor people. Effective knowledge of these contradictions along the chain of design, planning, operation, monitoring and evaluation of public policies is of extreme relevance, ideally to point them in the direction of social justice.

REFERENCES

Azevedo, V., C. Bouillon, and I. Irarrázaval. 2011. *Sistemas integrados de informacion social: su rol en la proteccion social*. Santiago: Pontificia Universidad Catolica de Chile.

Barca, V., and R. Chirchir. 2014. *Single registries and integrated MISs: de-mystifying data and information management concepts*. Canberra: Department of Foreign Affairs and Trade.

Browne, E. 2014. "Social protection management information systems (MIS)." *GSDRC Helpdesk Research Report*, No. 1180. Birmingham: University of Birmingham.

Castaneda T., and K. Lindert. 2005. "Designing and implementing household targeting systems: lessons from Latin American and the United States." *Social Protection Discussion Paper Series*, No. 526. Washington, DC: World Bank.

Di Virgilio, M., and R. Solano. 2012. *Monitoreo y evaluación de políticas, programas y proyectos sociales*. Buenos Aires: Cippec.

Ebken, W. 2014. "Single window services in social protection: rationale and design features in developing country contexts." *Discussion Paper on Social Protection*. Eschborn, Germany: Deutsche Gesellschaft für Internationale Zusammenarbeit.

Leite, P.P.G. et al. 2017. "Social registries for social assistance and beyond: a guidance note and assessment tool." *Discussion Paper*, No. 1704. Washington, DC: World Bank.

Lindert, K. 2016. "A Framework for Integration & Interoperability in Social Programs (benefits & services)." Paper presented at the International Seminar on Integration of Databases & Information Systems for the Improvement of Public Policy, Rio de Janeiro and Brasília, April 2016. Accessed 9 April 2018. <https://goo.gl/7SqyBE>.

Mation, L.F., and T.V.M. Santos. 2017. "Método para complementação dos grupos familiares do BPC com informações do Cadastro Único." *Nota Téchnica* 05. Brasília: Instituto de Pesquisa Econômica Aplicada.

Nogueira, L., and D. Sawyer. 2017. *Principais ferramentas e abordagens para um processo eficaz de monitoramento e avaliação (M&A) e integrando monitoramento e avaliação na prática*. (Basic text of lesson 1 of the course on monitoring and evaluation for social protection systems). Brasília: International Policy Centre for Inclusive Growth.

Villalobos, V.S., G. Blanco, and L. Bassett. 2010. *Management information systems for conditional cash transfers and social protection systems in Latin America: a tool for improved programme management and evidence-based decision-making*. Washington, DC: World Bank.

NOTES

5. In Brazil, these units are called 'social assistance equipment'.

6. Many public actions in the social sphere can be characterised at the national and international level.
We are not interested in over-specifying these limitations, precisely because this paper is meant to assess the relevance and the challenges of integrating information across government policies, including tearing down sector- and classification-related barriers.

7. The integrated registry is the main focus of this paper; the concept behind it will become clearer in Figure 1.

8. In the case of Brazil and of several countries operating dual social protection systems, both public and private, information in private subsystems must also be collected and systematically integrated with the public subsystem, at least at the strategic level, so that gaps and overlaps can be assessed more comprehensively.

9. See other advantages in Barca and Chirchir (2014) and Leite et al. (2017).

10. Leite et al. (2017) refer to the role of an 'honest broker' or a 'custodian' of information.

11. They are also known as 'single-window services'.

12. Social registries, in this sense, are considered inclusion and information systems by Leite et al. (2017).

13. See Mation and Santos (2017) for some of the challenges.

14. Although certain social protection policies may not constitute subjective rights—such as the Bolsa Família programme, which is conditioned on budget availability—other policies that rely on the integrated registry may indeed be an expression of constitutional rights, as is the case of the BPC. In this sense, there is no legal basis for benefits to be automatically granted without a request being made by a citizen, thus bringing a measure of irrationality to services provided to citizens, since, even though they may have been included in the data collected, citizens will still need a specific interface with each programme to apply for it and add any specific information not covered by the common registry block.

15. Barca and Chirchir (2014) would call this an 'integrated management information system'. According to the nomenclature used by Leite et al. (2017), it is an 'integrated social protection information system'.

16. Leite et al. (2017) use a classification scheme based on whether the agency that manages the registry is the same as the one that operates it, and whether it is national/centralised or local/decentralised.

17. This is the case of the British longitudinal survey entitled English Household Panel Survey (EHPS) and the longitudinal survey Understanding Society, now housed at the University of Essex and funded by the Economic and Social Research Council (ESRC) and a consortium of various national ministries in the UK government.

18. The tariff is an electricity subsidy programme targeting poor families registered in the Unified Registry and BPC, managed at the national level by the National Electricity Agency but operated through the decentralised and fragmented systems of more than 50 power distributors. The programme has been using the Unified Registry to select its beneficiaries since 2011, with annual beneficiary reviews.

19. This section is based on the experience of some of the authors at the head of the Unified Registry's management— an admittedly incomplete but rich view of ICT management needs.

International Policy Centre for Inclusive Growth (IPC-IG)

SBS, Quadra 1, Bloco J, Ed. BNDES, 13º andar
70076-900   Brasília, DF - Brazil
Telephone: +55 61 2105 5000

ipc@ipc-undp.org ▪ www.ipcig.org