INTEGRATING DATA AND INFORMATION MANAGEMENT FOR SOCIAL PROTECTION:
SOCIAL REGISTRIES AND INTEGRATED BENEFICIARY REGISTRIES

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INTEGRATING DATA AND INFORMATION MANAGEMENT FOR SOCIAL PROTECTION: SOCIAL REGISTRIES AND INTEGRATED BENEFICIARY REGISTRIES

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Valentina Barca
The principal author of this research report is Valentina Barca.

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## Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>APSP</td>
<td>Africa Platform for Social Protection</td>
</tr>
<tr>
<td>BISP</td>
<td>Benazir Income Support Programme, Pakistan</td>
</tr>
<tr>
<td>BPS</td>
<td>National Statistics Agency, Indonesia</td>
</tr>
<tr>
<td>Caixa</td>
<td>Caixa Econômica Federal, Brazil (operating agent of Cadastro Único (Unified Registry))</td>
</tr>
<tr>
<td>CD</td>
<td>compact disk</td>
</tr>
<tr>
<td>CDCP</td>
<td>Citizens Damage Compensation Program, Pakistan</td>
</tr>
<tr>
<td>CECAD</td>
<td>Information Consultation, Selection and Extraction Tool, Brazil</td>
</tr>
<tr>
<td>CT-OVC</td>
<td>Orphans and Vulnerable Children Programme, Kenya</td>
</tr>
<tr>
<td>DFAT</td>
<td>Department of Foreign Affairs and Trade, Australia</td>
</tr>
<tr>
<td>DFID</td>
<td>Department for International Development, United Kingdom</td>
</tr>
<tr>
<td>DSD</td>
<td>Department of Social Development, Kenya</td>
</tr>
<tr>
<td>FPS</td>
<td>Ficha de Protección Social (social protection form), Chile</td>
</tr>
<tr>
<td>GIS</td>
<td>geographic information system</td>
</tr>
<tr>
<td>HSNP</td>
<td>Hunger Safety Net Programme, Kenya</td>
</tr>
<tr>
<td>ICT</td>
<td>information and communications technology</td>
</tr>
<tr>
<td>ID</td>
<td>identification</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>ISAS</td>
<td>Integrated Social Assistance Information System, Turkey</td>
</tr>
<tr>
<td>ISMS</td>
<td>information security management system</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>IT</td>
<td>information technology</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>monitoring and evaluation</td>
</tr>
<tr>
<td>MDS</td>
<td>Ministerio do Desenvolvimento Social (Ministry of Social Development and Fight Against Hunger), Brazil</td>
</tr>
<tr>
<td>MIDEPLAN</td>
<td>Ministerio de Planificación y Cooperación (Ministry of Planning and Cooperation), Chile</td>
</tr>
<tr>
<td>MIS</td>
<td>management information system</td>
</tr>
<tr>
<td>MOSA</td>
<td>Ministry of Social Affairs, Indonesia</td>
</tr>
<tr>
<td>NADRA</td>
<td>National Database and Registration Authority, Pakistan</td>
</tr>
<tr>
<td>NGO</td>
<td>non-government organisation</td>
</tr>
<tr>
<td>NISIS</td>
<td>National Integrated Social Information System, South Africa</td>
</tr>
<tr>
<td>NSP</td>
<td>National Safety Net Programme, Kenya</td>
</tr>
<tr>
<td>ODA</td>
<td>on-demand application</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OPM</td>
<td>Oxford Policy Management</td>
</tr>
<tr>
<td>OPTC</td>
<td>Old Persons Cash Transfer, Kenya</td>
</tr>
<tr>
<td>OVC</td>
<td>Orphans and Vulnerable Children Programme, Kenya</td>
</tr>
<tr>
<td>PBF</td>
<td>Programa Bolsa Familia (Bolsa Familia Program), Brazil</td>
</tr>
<tr>
<td>PKH</td>
<td>Program Keluarga Harapan (Family Hope Program), Indonesia</td>
</tr>
<tr>
<td>PPLS</td>
<td>Pendataan Program Perlindungan Sosial (Data Collection for Social Protection Programs), Indonesia</td>
</tr>
<tr>
<td>PUSDATIN</td>
<td>Data Centre, Ministry of Social Affairs, Indonesia</td>
</tr>
<tr>
<td>PWSD-CT</td>
<td>Persons with Severe Disability Programme Cash Transfer, Kenya</td>
</tr>
<tr>
<td>RASKIN</td>
<td>Beras untuk Rumah Tangga Miskin (Rice for the Poor), Indonesia</td>
</tr>
<tr>
<td>RSH</td>
<td>Registro Social de Hogares (Social Registry of Households), Chile</td>
</tr>
<tr>
<td>SASSA</td>
<td>South Africa Social Security Agency</td>
</tr>
<tr>
<td>SIAS</td>
<td>Sistema de Información Integrada del Área Social (Social Integrated Information System), Uruguay</td>
</tr>
<tr>
<td>SIIS</td>
<td>Sistema Integrado de Información Social (Social Integrated Information System), Chile</td>
</tr>
<tr>
<td>SIBEN</td>
<td>Sistema de Identificación de Beneficiarios de Subsidios Sociales (System to Identify Beneficiaries of Social Subsidies), Colombia</td>
</tr>
<tr>
<td>SOCPEN</td>
<td>Social Pension System, South Africa</td>
</tr>
<tr>
<td>SITA</td>
<td>State Information Technology Agency, South Africa</td>
</tr>
<tr>
<td>TNP2K</td>
<td>Tim National Percepatan Penanggulangan Kemiskinan (National Team for the Acceleration of Poverty Reduction), Indonesia</td>
</tr>
<tr>
<td>UDB</td>
<td>Unified Database, Indonesia</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>UPSPK</td>
<td>Unit Penetapan Sasaran Penanggulangan Kemiskinan (Unit for Targeting and Poverty Reduction), Indonesia</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WWP</td>
<td>World Without Poverty</td>
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</table>
Given the ever-increasing focus on coordinating and harmonising social protection programs, aiming for a systems approach, countries have been exploring new ways to integrate data and better handle information, to ensure that the right people are receiving the right transfer amounts at the right time. This report attempts to address recent evolutions in this fast-paced field — including shifts in terminology and innovative best practice — and provides practical guidance for policymakers and practitioners grappling with the issue. The findings are based on a literature review of academic and grey literature on the topic; on extensive interviews and discussions with key informants; and on five in-depth case studies (Brazil, Chile, Indonesia, Kenya and Turkey). It updates the seminal publication on this topic (Barca and Chirchir, 2014). The main findings include the following:

» Developing a social protection information system — one that enables the flow and management of information within the social protection sector and sometimes beyond — can ensure a more equitable, responsive and inclusive distribution of resources while also increasing efficiency and effectiveness of delivery and, most importantly, better serving citizens (see Section 1.1).

» However, several trade-offs, challenges and risks can emerge when embarking on such a process — which need to be carefully managed and addressed from the outset. These can include increasing costs and complexity, risks to data privacy and security, and risks of multiple exclusion from all social sector schemes.

» Moreover, the extent to which the benefits of information integration are felt greatly depends on the practical set-up for integration and on the ultimate use and quality of the integrated system. See Section 2.2.

» These opportunities and challenges are determined by country-specific objectives, as well as institutional, operational and technological considerations, which in turn determine the specific approach to integration. Depending on these, international best practice may not be appropriate in every instance. In fact, integrating data and information may not always be a social protection policy priority.

» Two main (and overlapping) approaches to setting up an integrated data repository for the social protection sector can be adopted by countries: integrated beneficiary registries (integrate information from existing program management information systems (MISs) to house comprehensive information on beneficiaries); and social registries (centralise collection and housing of data on potential beneficiaries to integrate the approach to registration and eligibility determination). Social registries can also be operationalised as ‘virtual’ social registries (collect data by ensuring interoperability of existing administrative databases through web service access). See sections 2.3 and 2.4.

» Each of these approaches has advantages and disadvantages, and can help to achieve different objectives of integration depending on their ultimate set-up. Table 1 summarises these.

Table 1 What type of integration can be achieved? Comparing social registries and integrated beneficiary registries

<table>
<thead>
<tr>
<th></th>
<th>Social registries</th>
<th>Integrated beneficiary registries</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;E and overview of beneficiaries across programs</td>
<td>Only if registry receives data from program MISs</td>
<td>Yes</td>
</tr>
<tr>
<td>Integrated process for eligibility determination across programs</td>
<td>Yes</td>
<td>No (eligibility is determined at program level, then integrated)</td>
</tr>
<tr>
<td>Integrating operations and services across existing programs</td>
<td>Only if registry receives data from program MISs</td>
<td>Yes (if pursued as policy objective)</td>
</tr>
<tr>
<td>Integrating policy across social protection sector</td>
<td>Only if registry is linked to all social assistance programs, social insurance etc.</td>
<td>Only if registry is linked to all social assistance programs, social insurance etc.</td>
</tr>
<tr>
<td>Integration with other sector MISs</td>
<td>Only if application software enables this</td>
<td>Only if application software enables this</td>
</tr>
</tbody>
</table>
No matter which approach to setting up the data repository is selected, its full potential as an information system is only unleashed when it is used together with a software application that links it dynamically to other databases, systematically transforms data into information, and analyses and uses the information. For example, a system that guarantees full integration within the social protection sector and beyond, in accordance with the right to privacy, would establish a direct (web service) link — e.g. using each citizen’s national ID number as a unique identifier — to (a) all social assistance program MISs; (b) social insurance MISs; (c) any other relevant government MIS. See Section 2.5.

An ever-increasing number of low- and middle-income countries is embarking on this process of integration, with different forms of social protection information systems already fully institutionalised in 30 low- and middle-income countries worldwide. Many of these are set up as social registries. An additional 31 countries are in the process of developing such systems. These integrated systems range greatly in their set-up, size, functions and levels of cross-sectoral integration. What matters is not their official name (which varies widely), but what they are set up to do: where the data is flowing to and from. See Section 3.

When integrating information management in practice, a wide range of aspects need to be considered in order to develop a functional system, ranging across four pillars: policy and budget (e.g. whether investments are justified); administrative and institutional aspects (e.g. ideal institutional set up); operational and implementation aspects (e.g. how data should be collected, updated, linked and used); and technological aspects (e.g. hardware, software and data transfer). See Section 4.

Several lessons can be drawn from countries’ experience of developing social protection information systems to date. Most importantly:

- Integration is mainly a policy issue requiring political and institutional arrangements rather than technical ‘fixes’. Successfully implementing such systems requires strong political commitment to integration within the social protection sector and beyond, as well as careful assessment of the country context and possible costs and trade-offs of centralising data and information management — primarily privacy concerns.
- The policy drive towards integration has been very often dominated by a focus on consolidating targeting (registration and determination of eligibility) across several programs. While pursuing these objectives has been effective in several countries, it could be important to recognise the potential downsides of this approach and shift the main focus of integration towards better serving a country’s poorest and most vulnerable citizens throughout their life cycle.
1. INTRODUCTION AND SETTING THE SCENE

In recent years, there has been an ever-increasing focus on coordinating and harmonising social protection programs aiming for a systems approach\(^1\) (World Bank and UNICEF 2013; DFAT 2015; Azevedo et al. 2011; Samson 2006). Most recently, strengthening social protection systems figures prominently among the Sustainable Development Goals:

**Goal 1. End poverty in all its forms everywhere**

1.3 Implement nationally appropriate social protection systems and measures for all, including (social protection) floors, and by 2030 achieve substantial coverage of the poor and vulnerable.

The number of middle and lower income countries worldwide adopting national social protection strategies and seeking to coordinate interventions from different ministries and agencies has been rapidly increasing (ILO 2015a; Garcia and Moore 2012; Honorati, Gentilini and Yemtsov 2015), leading to a growing interest in exploring ways to integrate data and better handle information management across social protection programs.

A first version of this report (Single Registries and Integrated MISs: De-mystifying Data and Information Management Concepts) was produced in 2014, when the literature available on this topic was scarce and country experience less evolved and mostly undocumented. At the time, any experience with integration was classified as a ‘single registry’, the terminology that was most widely used. This second edition of the report attempts to address recent evolutions in this fast-paced field — including shifts in terminology and evidence generated at the international Workshop on Integrated Data and Information Management for Social Protection hosted by the Australian Department of Foreign Affairs and Trade (DFAT) in Jakarta in March 2015\(^2\) and shared in the Online Community on Social Registries and Integrated MISs hosted by Socialprotection.org.\(^3\)

Specifically, by focusing on the growing evidence from low- and middle-income countries worldwide, this paper sets out to:

- discuss the advantages of integrated data and information management (Section 1.1)
- discuss different models and objectives of integration (Section 1.2)
- clarify terminology and define key terms (Section 2)
- discuss the two main practical approaches to developing a social protection data repository: social registries and integrated beneficiary registries (Section 2.3)
- review country progress on developing social protection information systems (Section 3.1) and understand what drives countries’ different trajectories in this field (Section 3.2)
- develop a typology to help categorise country experiences (Section 3.3)
- describe the main steps, challenges and risks to consider when establishing an integrated system for data and information management — using social registries as an example (Section 4), with a focus on administrative and institutional aspects (Section 4.1); operational and implementation aspects (Section 4.2); technological requirements (Section 4.3); and costs, financing and political support (Section 4.4)
- provide recommendations for countries considering integration (Section 5)
- summarise the experience of establishing integrated systems in five case study countries (Brazil, Chile, Indonesia, Kenya and Turkey) (Annex 1).

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1 In this paper, social protection includes non-contributory social assistance and contributory social insurance. However, evidence shows that many solutions for integration are mostly used to manage information for non-contributory social assistance.


3 The online community www.socialprotection.org/connect/communities/social-registries-and-integrated-mis-social-protection provides a platform for members to learn from each other’s experiences of designing and implementing social registries and integrated management information systems that support the delivery of social protection programs.
1.1 Why is integrated information management for social protection important?

A joint 2013 note by the World Bank and UNICEF spells out that a systemic approach to data and information management for social protection can provide ‘a coordinated and harmonized response to the multi-dimensional vulnerabilities of individuals across a life-cycle’ — one that focuses on ‘exploiting interactions across programs and [is] mindful of establishing complementary incentives across programs’ (World Bank and UNICEF 2013).

The potential advantages of an integrated approach to data and information management can be analysed from policy and operational perspectives (these sometimes overlap) (Villalobos et al. 2010; Azevedo et al. 2011; Accenture 2012; Chirchir and Kidd 2011; World Bank and UNICEF 2013; OPM 2015a).

From a policy perspective, advantages can include the ability to:

» apply a potentially more equitable approach to distributing resources based on objective and comparable information, addressing the uneven and unequal provision of social protection across social groups and administrative jurisdictions

» increase responsiveness and inclusiveness of interventions to serve the chronically poor, serve those who are structurally vulnerable to poverty, and respond to individual shocks (e.g. job loss, disability, childbearing or old age) or large crises (e.g. natural disaster or conflict)

» ensure universal coverage and support implementation of the social protection floor (nationally defined sets of basic social security guarantees), potentially coordinating social assistance and social insurance

» build a stronger link to complementary institutional frameworks and wider social and economic policies

» increase transparency and accountability, since program information can be more easily shared and compared

» improve the ‘image’ of the social protection system, as citizens better understand their entitlements

» increase knowledge about poverty and vulnerability based on access to the large amount of information available.

From an operational perspective, advantages can include the ability to:

» facilitate oversight of multiple schemes and reporting to policymakers

» improve budget planning and ability to model and test policy changes

» decrease the burden on staff (e.g. less paperwork, less manual reporting)

» decrease the burden on potential applicants (e.g. ability to apply for several programs at once, need for fewer documents, better / more coordinated information on entitlements)

» avoid duplication of effort (e.g. with data collection activities) and potentially establish a ‘common entry point’ for social protection

» establish common systems across all schemes (e.g. payment system, grievance mechanisms), increasing efficiency and saving money

» better manage error and fraud and monitor multiple payments (keeping track of who is receiving what)

» further digitalise service delivery, potentially reaching out to citizens in new ways (e.g. mobile phones)

» enable beneficiaries to transition between schemes as their circumstances change

» establish more effective emergency responses (e.g. by directing additional payments to social protection recipients in areas affected by an emergency for a limited period) and context-based services.

4 ‘SP systems have the potential for maximizing outcomes and impacts if they are conceived as integral components of national development and poverty reduction strategies, linked with complementary programs (e.g.: livelihood promotion, labour market and intermediation programs, food security programs, etc.) and macro policy determinants (macroeconomic stability, economic growth, etc.).’ Organisation for Economic Co-operation and Development (OECD) 2009.

5 For example, see Kenya’s Hunger Safety Net Programme (HSNP) Phase 2 and Pakistan’s CDCP program. For more discussion on this topic see the comprehensive literature review at socialprotection.org/connect/communities/social-registries-and-integrated-miss-social-protection (Oxford Policy Management 2016). See also Section 4.2.7 and Box 11 on Pakistan.
Potentially, the greater the interconnectivity the greater the gains in efficiency and effectiveness of service delivery. The key issue is therefore the level of coordination and interoperability achieved, not the creation of a super-sized system or database that serves all purposes. However, several challenges and risks can emerge when embarking on such a process of data integration within the social sectors. These are discussed in depth in Section 4. They include:

- increasing costs and complexity — especially at the initial development stages — call for high capacity, strong policy leadership and institutional coordination
- increasing risks to data privacy and security — misusing or losing information, potentially exposing households to further vulnerability (e.g. ‘surveillance state’)
- risks of multiple exclusion from all social sector schemes and systematic exclusion of certain types of households.

Moreover, the extent to which the benefits of information integration are felt greatly depends on the practical set-up for integration (see sections 2.3, 2.4, 2.5 and 5.1) and on the ultimate use of the integrated system (see Section 5.1).

### 1.2 Three objectives for integration: integrating what?

To conclude, it is important not to lose sight of the ultimate aim of integrating data and information management systems for social protection: collecting and sharing information to take action so as to improve the standards of life of the poorest and most vulnerable citizens.

While the potential advantages of integrating data and information management for social protection are clear (see Section 1.1), not all countries pursue integration for the same reasons. This affects the ultimate choice of approach to integration (see Section 2), which in turn affects what advantages can be reaped in practice. In reviewing the literature on the topic, three main objectives for integration emerge. These are discussed below.

Consensus is that policymakers should consider all of these objectives, aiming to reap as many of the benefits of integration as possible (Section 1.1), rather than focus on one or the other.

#### 1.2.1 Providing coordination and oversight

The first key objective — shared by almost all integrated systems, although to differing degrees — is to integrate existing program management information systems (MISs) and their databases to develop an overview of who is receiving what, coordinate interventions, facilitate planning and more generally combine monitoring and evaluation (M&E) across programs. An added benefit is the ability to check for multiple receipt of benefits across programs (Box 1). National governments often push for this, eager to gain increased control over their social spending and increase efficiency.

---

6 Interoperability is a characteristic of a product or system whose interfaces are completely understood, enabling it to work with other products or systems, present or future, in either implementation or access, without any restrictions.

7 A large whole-of-government information and communications technology system is unrealistic and risks being too complex to be useful. Instead e-government, for the purposes of this paper, means a set of policies and frameworks that ensure interoperability of multiple government sector systems and use of IT to provide services to citizens.

8 This does not imply that other objectives are not valued by the proponents of one or the other; they may simply be given less priority.
In practice, unless data flows back from program MISs to the integrated system, such an overview is not always possible (see Table 3 for example).

### Box 1: Monitoring receipt of multiple benefits across programs

Reducing the chance of ‘double-dipping’ (excluding ineligible households that have ‘tricked’ the system from receiving multiple benefits they are not entitled to) is widely cited as an important benefit of integrating information management across programs.

However, it should be noted that receiving multiple benefits is not problematic per se. This is the case in an integrated vision of social protection where different programs cater for different needs of households and individuals at different stages of life, complementing each other, which is what occurs in many high-income countries and could be important to explore for countries developing social protection strategies.

The cost savings involved in preventing fraudulent double-dipping can be high, as exemplified by Iraq’s Social Safety Net Information System. By integrating beneficiary information across several programs, the system has allowed Iraq’s Ministry of Labour and Social Affairs to identify duplicate (and sometimes triplicate) beneficiaries, excluding about 57,000 households out of 120,000 in Baghdad alone and resulting in savings of about 18 million US dollars to the system’s budget (World Bank 2012a).

#### 1.2.2 Consolidating processes for determining potential eligibility for social assistance

The second key objective, which has been acquiring a great deal of weight internationally in response to fears of fragmentation across the social protection sector, focuses primarily on consolidating back-office processes for determining potential eligibility for social assistance by creating ‘unified household targeting systems’ designed to serve multiple social programs, sometimes with differing thresholds or criteria for eligibility (Castaneda and Lindert 2005). The rationale for this includes:

1. maximising coverage of the poor by minimising errors of exclusion
2. minimising leakages to the non-poor by minimising errors of inclusion, by ensuring more resources are spent on programs that use household targeting systems
3. cost efficiency through minimising the cost of interviewing families by programs or agencies while ensuring the integrity of intake efforts
4. transparency in all aspects to enhance credibility and reduce fraud.

The potential trade-offs of integrated eligibility determination processes are discussed in Section 4.2.6.

#### 1.2.3 Integrating and coordinating operations and services

The third key objective is proposed by those advocating for integration and coordination of front-office operations and services within the social protection sector and beyond. This is strongly linked to the single-window service concept.

According to proponents, integration should be focused on:

1. user experience and ease of access to the social protection system — families should be able to register and access any relevant information in a single office at sub-national level
2. streamlining key operations across different programs, to increase efficiency and effectiveness (e.g. grievances, payments, M&E)
3. offering an integrated package of programs and services, within the social protection sector and beyond (e.g. health, education, employment), through social workers at local level who evaluate needs (case management).

Further discussion of the functionalities, operations and services that can be integrated across different social protection programs beyond initial registration is provided in Section 4.2.5.