

Social Registries for Social Assistance and Beyond: A Guidance Note & Assessment Tool

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July 2017



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Abstract

This paper makes several contributions. First, it presents a “Guidance Note” on the framework for Social Registries, anchoring the definition of these systems in their *functions* along the Delivery Chain and their social policy role as *inclusion systems*, while clarifying terminology in a manner that is consistent with IT standards in the discussion of their architecture as *information systems*. Second, it illustrates the diverse typologies and trajectories of country experiences with Social Registries with respect to their (a) institutional arrangements (central and local); (b) use as inclusion systems (coverage, single or multi-program use, static or dynamic intake and registration); and (c) structure as information systems (structure of data management; degree and use of interoperability with other systems). These patterns primarily derive from a review of Social Registries in a sample of 20 countries), (Azerbaijan, Brazil, Chile, China, Colombia, the Dominican Republic, Djibouti, Georgia, Indonesia, Macedonia, Mali, Mauritius, Mexico, Montenegro, Pakistan, the Philippines, Senegal, Sierra Leone, Turkey, and Yemen). The paper also draws on experience in other countries (Kenya, Rwanda, Nigeria, Egypt, Jordan, Vietnam, India, Estonia, Belgium, the US, Canada, Australia, and others) to illustrate specific points. Third, this paper develops a basic “Assessment Tool” covering the core building blocks of Social Registries using a “checklist” style of questions. Given the wide diversity of Social Registries in both their role in social policy and in their architecture, the approach is not prescriptive: it does not advocate for any specific model or blueprint for Social Registries. Any diagnostics or recommendations that emerge from use of this Guidance Note and Assessment Tool will be country specific. Some key take-away messages include: (a) the importance of recognizing both the role of the “front lines” for outreach, intake and registration (Social Registries as *inclusion systems*) and the “back office” functions of Social Registries as *information systems*; (b) the potential power of Social Registries as integrated and dynamic gateways for inclusion; (c) the recognition that Social Registries are generally part of end-to-end systems for specific programs, integrated social protection information systems, and/or even “whole-of-government” approaches; and (d) there is significant diversity in the typology and trajectories of Social Registries across countries and over time.

JEL Classification: D60, D70, D80, H41, I38, O35, O38, O52, O53, O54, O55, O56 and O57

Keywords: social registries (aka unified registries, single registries, unique registries, registration and eligibility systems), integrated social protection information systems, integrated social information systems, delivery systems, social assistance, transfers, social insurance, social protection, Azerbaijan, Brazil, Chile, China, Colombia, the Dominican Republic, Djibouti, Georgia, Indonesia, Macedonia, Mali, Mauritius, Mexico, Montenegro, Pakistan, the Philippines, Senegal, Sierra Leone, Turkey, and Yemen

¹ This Working Paper was prepared by a team at the World Bank led by Phillippe Leite (TTL, Senior Economist), and including Tina George, Changqing Sun, Polly Jones, and Kathy Lindert, all from the Social Protection & Labor Global Practice (GSPDR). The work is supported by a grant from the Rapid Social Response Fund (RSR; Task ID P154851). This Working Paper is expected to contribute to further discussions with development partners under the Inter-agency Social Protection Assessment (ISPA) initiative. Contacts: Phillippe Leite (Senior Economist) plite@worldbank.org or Kathy Lindert (Global Lead) klindert@worldbank.org.

Contents

| | |
|---|----|
| Abstract | 1 |
| Acknowledgements..... | i |
| Glossary of Acronyms..... | ii |
| Executive Summary | iv |
| Chapter 1: Introduction..... | 1 |
| A. Setting the Stage | 1 |
| B. Objectives, Basic Premises, and Value Added of this Paper | 2 |
| C. Delineating the Boundaries of this Paper | 3 |
| Chapter 2: Terminology: What are Social Registries?..... | 5 |
| A. Social Registries are Inclusion Systems | 5 |
| B. Social Registries are Information Systems | 8 |
| Chapter 3: The Functioning of Social Registries as Inclusion Systems..... | 9 |
| A. A Deeper Look at Basic Functions of Social Registries along the Delivery Chain..... | 9 |
| Outreach..... | 10 |
| Intake & Registration | 12 |
| Assessment of Needs & Conditions to Determine Potential Eligibility..... | 12 |
| Processes for Updating Information | 13 |
| Mapping Functions and Key Actors for the Social Registry..... | 14 |
| B. Integrated Social Registries as Common Gateways for Multiple Social Programs | 16 |
| C. Social Registries and Dynamic Inclusion | 18 |
| Chapter 4: The Architecture of Social Registries as Information Systems..... | 21 |
| A. Basic Architecture of Social Registries as Information Systems..... | 21 |
| Data & Information | 24 |
| Software Applications | 27 |
| Database Management and Interoperability..... | 28 |
| ICT Infrastructure | 32 |
| B. Social Registries in the Context of Integrated Social Protection Information Systems | 33 |
| Social Registries are Just One Component of Social Protection Information Systems..... | 33 |
| Two Parts of the Puzzle: Integrated Social Registries & Integrated Beneficiary Registries | 35 |
| Putting the Puzzle Together: Integrated Social Protection Information Systems | 37 |
| Building Integrated Social Protection Information Systems | 38 |
| Chapter 5: Cross-Country Typologies and Trajectories of Social Registries..... | 39 |
| A. Diverse Institutional Arrangements and Legal Foundations..... | 40 |
| Institutional Arrangements | 40 |

| | |
|--|----|
| Legal Foundations | 46 |
| A. Diverse Typologies and Trajectories of Social Registries as Inclusion Systems | 47 |
| Diversity in Population Coverage of Social Registries | 47 |
| Diversity in Social Policy Roles: Single-Program vs. Integrated Social Registries..... | 52 |
| Diverse Typologies & Trajectories of Social Registries as Inclusion Systems..... | 55 |
| B. Diverse Typologies of Social Registries as Information Systems..... | 61 |
| Structure of data management: centralized vs. virtual | 61 |
| Degree and use of interoperability and data integration with other information systems | 62 |
| Chapter 6: The Cost of Social Registries..... | 70 |
| Chapter 7: Assessment Tool..... | 72 |
| Part 1 - Characterizing & Situating the Main Features of the Social Registry..... | 73 |
| Situating the Social Registry in Country Context & Social Protection Landscape (Current and Envisaged) . | 73 |
| Characterizing the Social Registry in Terms of Core Features (Current and Envisaged)..... | 74 |
| Part 2 - Structural Features: Institutional Arrangements, Citizen Interface and User Programs | 74 |
| Institutional and Legal Arrangements for the Social Registry..... | 74 |
| Citizen Interface (also crucial for “Dynamic Inclusion” aspects)..... | 75 |
| User Programs for the Social Registry (Single-Program or “Integrated” Multi-Program Gateway) | 76 |
| Part 3 - Delivery Processes: Outreach, Intake & Registration, Assessment of Needs and Conditions to Determine Potential Eligibility, Updating, and Grievance Redress..... | 77 |
| Outreach..... | 78 |
| Intake & Registration Processes..... | 78 |
| Assessment of Needs & Conditions to Determine Potential Eligibility..... | 79 |
| Determination of Potential Eligibility vs Enrollment Decisions..... | 80 |
| Processes for Updating Information | 80 |
| Grievance Redress..... | 81 |
| Part 4 - Information Systems Aspects | 81 |
| Data and Information..... | 81 |
| Software Applications | 85 |
| Database Management and Interoperability..... | 86 |
| ICT Infrastructure | 87 |
| Institutional Aspects of Information Systems | 88 |
| Part 5 - Measuring the Performance of Social Registries..... | 89 |
| Inclusion: Coverage, Equity, Accessibility | 89 |
| Efficiency: for Citizens, Administrators, User Programs | 89 |
| Accuracy: Data Quality, Systems Integrity | 91 |
| Systems for Performance Measurement, Reporting, Use in Social Policy Planning..... | 91 |

| | |
|---|-----|
| Bibliography | 92 |
| Annex 1: Case Examples of Diverse Typologies & Trajectories of Social Registries..... | 96 |
| Annex 2: Using Delivery Chain Process Mapping Tool for Social Registries | 103 |

Acknowledgements

This paper is the product of a task team led by Phillippe Leite, Senior Social Protection Economist, under the technical guidance of Kathy Lindert, Global Lead for Social Protection & Labor Delivery Systems, and the management of and Anush Bezhanyan, Practice Manager, Social Protection & Labor Global Unit, and the broader leadership of Michal Rutkowski, Senior Director for the Social Protection & Labor Global Practice, all of the World Bank Group. The paper was co-authored by Phillippe Leite, Tina George, Changqing Sun, Theresa Jones, and Kathy Lindert.

The task team benefitted immensely from feedback from extensive technical workshops and consultations, seminars, and “live case” country engagements in numerous countries. Early guidance was provided by a Working Group that includes the team members plus: Robert Palacios, Setareh Razmara, Laura Rawlings, Veronica Silva, Alexi Sluchynskyy, also from the Social Protection & Labor Global Practice (GSPDR). The paper benefitted from formal World Bank review, including from the following peer reviewers from each of the regional units of the World Bank’s Social Protection & Labor Global Practice: Cornelia Tesliuc (Africa); Marina Petrovic (Europe and Central Asia); Lucian Pop (South Asia); Pip O’Keefe (Pip O’Keefe); Diego Angel-Urdinola (Middle East & North Africa); Claudia Baddini (Latin America and the Caribbean).

The team would like to extend sincere thanks to the many colleagues provided inputs and feedback throughout the process, including: Aleksandra Posarac, Alex Kamurase, Alexi Sluchynskyy, Amjad Zafar Khan, Arvind Srinivasan, Asha M. Williams, Ashiq Aziz, Boryana Gotcheva, Briana N. Wilson, Camila Holmemo, Cem Dener, Cesar Baldeon, Claudia Baddini, Cornelia Tesliuc, Dena Ringold, Diego Angel-Urdinola, Dwen Wang, Emil Daniel Tesliuc, Foluso Okunmadewa, Francesca Lamanna, Gul Najam, Heba Elgazzar, Hideki Mori, Hinda Kada, Iftikhar Malik, Jamele Rigolini, Jimena Garrote, Josefina Posadas, Jumana Alaref, Khalid Ahmed Ali Moyeyddeen, Laura Rawlings, Lucia Solbes Castro, Lucian Pop, Luz Stella Rodriguez, Maddalena Honorati, Maria Concepcion Steta Gandara, Marina Petrovic, Margaret Grosh, Matthew Liam Hobson, Melis Guven, Melissa Zumaeta Aurazo, Muderis Mohammed, Nga Nguyen, Nina Rosas, Pablo Ariel Acosta, Philippe Auffret, Pip O’Keefe, Puja Dutta, Ramya Sundaram, Randa G. El-Rashidi, Rashiel Velarde, Richard Chirchir, Robert Palacios, Ruslan G. Yemtsov, Samia Ausaf, Samia Melhem, Sara Giannozzi, Setareh Razmara, Stefanie Brodmann, Surat F. Nsour, Thomas Walker, Ugo Gentilini, Valentina Barca, Veronica Silva, Vanessa Moreira da Silva, William Wiseman, Wouter Matthijs Takkenberg, and Yasuhiko Matsuda.

The team is grateful for funding and support from a grant from the Rapid Social Response Fund (RSR; Task ID P154851) and from the Social Protection & Labor Delivery Systems Global Solutions Group. This Working Paper is expected to contribute to further discussions with development partners under the Inter-agency Social Protection Assessment (ISPA) initiative.

Glossary of Acronyms

| | |
|---------------|---|
| APIs | Application programming interfaces |
| BIPS | Integrated Inventory of Social Programs (Chile) |
| CadUNICO | Cadastro Unico (Brazil) |
| CBMIS | Cash Benefits Management Information System (Macedonia) |
| CBSS | Crossroads Bank for Social Security (Belgium) |
| CPF | Cadastro de Pessoa Fisica |
| CSW | Centers for Social Work |
| CCT | Conditional Cash Transfers |
| DSWD | Department for Social Work and Development (Philippines) |
| DV | Data Virtualization |
| ECD | Early Childhood Development |
| ESB | Enterprise Service Bus |
| ETL | ExtractTransform Load |
| EU | European Union |
| G2C | Government to Citizen |
| ICT | Information and Communication Technologies |
| ID | Identification t |
| ID4D | Identification for Development |
| ISAS | Integrated Social Assistance System (Turkey) |
| JigisemeJiri | Safety Nets System (Mali) |
| MCSW | Municipal Centers for Social Work |
| MIS | Management Information System |
| MoU | Memorandum of Understanding |
| MDSA | Ministry of Social and Agrarian Development |
| MSS | Ministry of Social Security, National Solidarity, and Reform Institutions |
| MoLHSA | Ministry of Labor, Health, and Social Assistance |
| MoPMAR | Ministry of Planning, Monitoring and Administrative Reform |
| MoSFP | Ministry of Family and Social Policies (Turkey) |
| NASSCO | National Social Safety Nets Coordinating Office (Nigeria) |
| NGO | Non-Governmental Organization |
| NHTS-PR | National Household Targeting System for Poverty Reduction |
| NIS | Unique Social Security Number (Brazil) |
| NSER | National Socio-Economic Registry |
| NTHO | National Household Targeting Office (Phillipines) |
| noSQL | Not only Structured Query Language |
| OECD | Organisation for Economic Co-operation and Development |
| OLAP | Online Analytical Processing |
| O2O | Offline-to-Online |
| PARIS-MATCH | Public Assistance Recording System |
| PIN | Personal identification number |
| PIS | Social Integration program number (Brazil) |
| PROSPERA | Mexican Safety Nets Program |
| RDBMS | Relational Database Management System |
| RSH | Households Social Registry (Chile) |
| RIB | Integrated Beneficiary Registry (Chile) |
| RNU | Unified National Registry (Senegal) |
| RPHR | Rural Poor Household Registry (China) |
| RSU | Unified Social Registry (Mali, Djibouti) |
| SADG | Social Assistance Directorate General |
| SCOPE | WFP's beneficiary and transfer management system |
| SEDESOL | Ministry of Social Development (Mexico) |
| SIFODE | Integrated System for Development (Mexico) |
| SIIS | Integrated Social Information System (Chile) |
| SISBEN | Beneficiary identification system (Colombia) |
| SIUBEN | Unique Beneficiary identification system (Dominican Republic) |
| SNAP | Supplemental Nutrition Assistance Program (USA) |
| SOA | Service Oriented Architecture |
| SPL | Social Protection and Labor |
| SPRINT | Social Protection Registry for Integrated National Targeting (Sierra Leone) |
| SR | Social Registries |
| SRM | Social Registry (Mauritius) |
| SSL Handshake | Secure Sockets Layer Handshake |
| SSN | Social Safety Nets |
| SWF | Social Welfare Funds (Yemen) |
| SWIS | Social Welfare Information System (Montenegro) |
| TANF | Temporary Assistance for Needy Families (USA) |

| | |
|---------|---|
| TNP2K | National Team for the Acceleration of Poverty Reduction (Indonesia) |
| TSA | Targeted Social Assistance (Georgia) |
| TUBITAK | Scientific and Technological Research Council of Turkey |
| UDB | Unified DataBase (Indonesia) |
| UNR | Unified National Registry (Egypt) |
| VPN | Virtual private network |
| VEMTAS | Electronic Application and Appointment Subsystem (Azerbaijan) |
| WIC | Women-and-Infant Children |
| WLAN | Wireless local area network |
| WFP | World Food Programme |

Executive Summary

Many countries offer a myriad of social benefits and services to meet the diverse needs of their populations. Examples of social benefits include cash transfers (conditional or unconditional) or in-kind benefits. Examples of services include activation or social services for children, youth, parents, or the elderly; labor and activation programs, and so forth. Although these programs may seem quite different, they usually pass through common phases along the delivery chain, including: (a) determining potential eligibility, via outreach; intake & registration; assessment of needs and conditions; (b) taking decisions on enrollment and the benefits or service package; and (c) carrying out the implementation cycle of transactions (payments or service provision) and active case management (including counseling, conditionalities monitoring, accompanying measures, grievance redress, and so forth).

Social Registries support the first phase of this delivery chain. Specifically, **Social Registries are information systems that support outreach, intake, registration, and determination of potential eligibility for one or more social programs**. They have both a social policy role, as *inclusion systems*, and an operational role, as *information systems*. While there are many technical aspects involved in designing and implementing Social Registries, their role in social policy is actually quite simple: to provide a “gateway” for potential inclusion of intended populations into social programs.

- **For individuals, families or households (“citizens”)**, this typically means knowing when and where they can register for potential inclusion, what is the process, what information and documents they will need to provide, how they can check on the status of their application or file a grievance, and when they will be notified of eligibility and enrollment decisions. It also means knowing when and where to update their information, and whether or not they can register at any time – particularly if their situations worsen. If multiple programs require separate applications, then citizens will have to navigate the bureaucratic maze and provide similar information and documentation multiple times – often at different locations. If multiple programs use common intake and registration “gateways” (as “Integrated Social Registries”), citizens can potentially gain access to a broad array of benefits and services, with far fewer transactions costs.
- **For Administrators**, key functions include reaching out to intended populations to inform and reach them for intake and registration, collecting information and documentation from citizens (usually via application questionnaires taken in person or online, interviews, and possibly home visits), entering and managing the information, cross-checking for consistency and accuracy (including with other information systems), assessing potential eligibility against program-specific eligibility criteria, managing complaints and grievances, and so forth. These processes can be costly, particularly if social programs carry them out separately. Harmonizing expensive steps, such as intake and registration, can generate efficiencies and cost savings when multiple programs use an Integrated Social Registry – even if they each use program-specific eligibility criteria. Data validation and verification, oversight and controls, and interoperability can also boost information quality and accuracy.

In addition to supporting registration and eligibility functions, the data produced by Social Registries are also used by countries for other purposes, such as calculating benefit levels, validating information collected through other methods or sources, assessing potential demand for interventions, planning and costing interventions depending on projected coverage rates, monitoring and evaluation, or other analytics purposes.

As *inclusion systems*, Social Registries can serve as a gateway to one program – or many programs. When multiple programs use a common Social Registries (or “Integrated Social Registry”), they can play an important social policy role in helping coordinate efforts to reach intended populations, thereby facilitating synergies across programs aiming to deliver complementary benefits and services to common groups. In fact, Social Registries can serve as a powerful platform that can extend well beyond social assistance programs. Many countries use Integrated Social Registries to support determination of potential eligibility for a range of other

interventions, some targeted, some universal in nature. Examples include: subsidized health insurance, social energy tariffs, education and training vouchers, subsidized child care, financial inclusion services, pro bono legal services, and so forth. The advantages of using Integrated Social Registries for multiple programs can be significant, in terms of reduced transactions costs and increased access for citizens, cost-savings and efficiency for user programs, and coordination of social policy. Key ingredients for Integrated Social Registries include inter-institutional coordination, common eligibility concepts and a shared intake questionnaire, and capabilities for information sharing and data exchange.

Social Registries can also serve as “dynamic” gateways for inclusion of the poor and vulnerable, meaning that access to registration is open and continuous, usually with on-demand applications combined with active outreach to vulnerable populations. This dynamism is closely related to the human rights agenda and the progressive realization of universal social protection, whereby anyone who needs social protection can access it at any time. Despite the significance of the principle of dynamic inclusion, many countries operate registries with “fixed lists” of registrants and beneficiaries. These systems are most common in developing countries, where social assistance programs are rather new, coverage is small, fiscal space is constrained, and administrative capacity limited. A typical approach is to conduct registration through waves of *en masse* data collection (often called “census sweeps”), which are usually carried out every 4-5 years, with registration (and updates) closed during the interim years. One of the reasons that many countries operate “fixed list systems” is that many of the key ingredients for implementing dynamic inclusion systems remain elusive, including: (a) fiscal space and flexibility; (b) political will to remove those who no longer qualify to make room for those who do; (c) flexible eligibility criteria that can accommodate and signal changing circumstances; and (d) limited administrative capacity, including a permanent and widespread network of access points for citizen interface.

Operationally, Social Registries are *information systems*. Information is the core input and output of Social Registries. The main “inputs” to these systems include various types of information needed to determine potential eligibility for social programs, which typically includes identifying information, socio-economic information, information on housing and assets, and other types of information depending on the purpose of the Social Registry. The main “outputs” of Social Registries are data that have been transformed into standardized formats, indices, or aggregations that permit assessment of needs and conditions against program eligibility criteria. This information is managed via information systems that intermediate between citizens, programs, and institutions. The basic architecture for these information systems includes (a) data & information (data intake, data exchange, data protection); (b) software applications to support both front-office and back-office functions; (c) database management and interoperability; and (d) ICT infrastructure.

It is important to note, however, that Social Registries don’t operate in isolation – and are usually part of a much larger information system supporting social programs. First, Social Registries are distinct from beneficiary registries (or information systems that support management of specific programs) in their purposes, population coverage, and functions. Whereas Social Registries include information on all registrants (applicants) and support the “gateway” functions of intake, registration and determination of eligibility, Beneficiary Registries include information only on those enrolled in specific programs to support beneficiary and benefits administration. Second, both Social Registries and Beneficiary Registries are typically developed within a broader information system – either to support a specific program or as part of an integrated social protection information system for multiple programs. Other elements generally include benefits administration systems, grievance redress systems, case management systems, unique identification systems, business intelligence and analytics, interoperability framework, and so forth.

Interestingly, many countries, such as Brazil, operate Integrated Social Registries to support a common “gateway” for potential inclusion in many programs – but then lack Integrated Beneficiary Registries to monitor and coordinate “who receives what” across programs. Other countries, such as Kenya, operate an Integrated Beneficiary Registry to coordinate beneficiary and benefits administration, but lack an Integrated Social Registry

to provide a common gateway for potential inclusion in various social programs. Some countries, such as Chile and Turkey, have combined these approaches to create Integrated Social Protection Information Systems, which can serve as powerful tools for assessing the “demand” for social programs by profiling specific needs and conditions of various groups of the population (via Integrated Social Registries), monitoring and coordinating the “supply” of social programs (via Integrated Beneficiary Registries), assessing gaps and duplications in coverage of key bundles of benefits and services that could be tailored to the typical needs of profiled groups. When georeferenced, these systems can also facilitate crisis and disaster response.

Analysis of Social Registries in 20 countries (Azerbaijan, Brazil, Chile, China, Colombia, the Dominican Republic, Djibouti, Georgia, Indonesia, Macedonia, Mali, Mauritius, Mexico, Montenegro, Pakistan, the Philippines, Senegal, Sierra Leone, Turkey, and Yemen) reveals considerable diversity in the typologies and trajectories of these systems with respect to their (a) institutional arrangements (central and local); (b) use as inclusion systems (coverage, single or multi-program use, static or dynamic intake and registration); and (c) structure as information systems (structure of data management; degree and use of interoperability with other systems).

- ***Institutional Arrangements*** for managing and operating Social Registries at the *central* level vary significantly across countries. Several models are observed: (a) Social Registry hosted, managed, and operated by a “central social agency,” such as a social ministry (examples include: Azerbaijan’s VEMTAS, China’s RHPR, Chile’s RSH, Djibouti’s RSU, Georgia’s TSA Registry, Macedonia’s CBMIS, Mauritius’ SRM, Mexico’s SIFODE, Philippines’ Listahanan, Senegal’s RNU, Sierra Leone’s SPRINT, Turkey’s ISAS, and Yemen’s SWF Registry); (b) Social Registry hosted and managed by central social agency, but implemented by separate “operating agency” (examples include Brazil’s Cadastro Unico, Mali’s RSU, and Montenegro’s SWIS); (c) Social Registry managed and operated by other central agency (examples include: Colombia’s SISBEN, Dominican Republic’s SIUBEN, and Indonesia’s UDB); and (d) Social Registry managed and operated by a specific social program, but serving other agencies (e.g., Pakistan’s NSER). There is even more diversity in the “local” *institutional arrangements* for managing citizen interface. *Among countries using on-demand application methods*, all except Azerbaijan accept applications at local offices, although the jurisdiction may vary: (a) some use deconcentrated offices of the central social agency (e.g., China (provincial and local offices), Georgia, Macedonia, Montenegro, Mauritius, and Turkey); (b) others use offices of local municipal governments (e.g., Brazil, Chile, Colombia); and (c) others use a common application that can be submitted via intake and registration methods for numerous social programs (e.g., Mexico). Several countries in our sample also use electronic applications via digital service windows (e.g., Azerbaijan, Chile, Turkey). *Among countries using en masse registration methods*, (a) many use contracted field teams (Philippines, Colombia, Dominican Republic, Yemen); (b) others use communities and contracted field teams (Djibouti, Mali, Senegal, Sierra Leone); (c) some outsource to contracted firms (Pakistan) or NGOs (previously in Dominican Republic); and (d) one uses the field teams of the national statistics office for collection of registration data (Indonesia).
- ***Coverage*** of Social Registries varies across countries. Some Social Registries have near universal coverage (Chile, Pakistan, the Philippines, the Dominican Republic, Colombia). Others cover between one third and one half of the population (Brazil, Georgia, Indonesia, Mexico, Montenegro, and Turkey), with self-selection likely playing a role in deterring higher-income individuals or households from applying in those with on demand systems. Finally, others operate on a much smaller scale, either because they have been implemented in specific geographic areas before expanding to national coverage (e.g., China (rural areas RPHR), Djibouti, Mali, Senegal, Yemen) or because the programs they serve are very narrowly targeted (e.g., Azerbaijan).
- Most countries in our sample use ***Integrated Social Registries as gateways for multiple programs***. Some use Social Registries for just one program (Azerbaijan, Yemen); others for a handful of programs (Senegal, Djibouti, Sierra Leone, Mauritius, Indonesia, Dominican Republic, China). Still others use Integrated Social Registries for dozens of programs (ranging from over a dozen in Georgia and Turkey, to around two dozen programs in Mexico, Macedonia, Montenegro, Brazil, and Colombia, and many more in the Philippines,

Pakistan, and Chile). All of the countries in our sample use their Social Registries for cash transfers (either conditional or unconditional), usually targeted to the poor, vulnerable, or low-income groups. Beyond cash assistance, many use Integrated Social Registries to support a wide range of benefits and services, some “targeted” and others “universal.” Examples include social pensions; health insurance or health care subsidies; utility & transport subsidies; education and skills; labor and employment programs; housing programs; sustainable livelihoods; agriculture, land, or environmental conservation; emergency assistance; in-kind benefits, social services; legal services; war veterans benefits; and a range of sub-national programs (often including similar types of benefits and services). Essentially, these Integrated Social Registries can serve as a powerful “multi-sided platform” across sectors, agencies, and programs. Generally, the larger the number of social programs that use the registry, the larger the coverage.

- Some – but not all – countries in our sample operate Social Registries that support **dynamic inclusion**, meaning that anyone can register into the Social Registry at any time. Examples include: Azerbaijan’s VENTAS, Brazil’s Cadastro Unico, Chile’s RSH, Georgia’s TSA Registry, Macedonia’s CBMIS, Mauritius’ SRM, Mexico’s SIFODE, Montenegro’s SWIS, and Turkey’s ISAS. Generally, on-demand methods for intake and registration lend themselves more to dynamic inclusion. In contrast, in those countries that rely primarily on *en masse* census sweeps, registration is typically open only infrequently, usually only every 4-5 years (e.g., in Pakistan’s NSER, the Philippines’ Listahanan, Dominican Republic’s SIUBEN, Indonesia’s UDB, Djibouti’s RSU, Sierra Leone’s SPRINT, Mali’s RSU, Senegal’s RNU, and Yemen’s SWF. *En masse* registration may be more feasible for countries that are “just starting out” – or with limited front-office capacity or severe data constraints. They can also be effective in specific regions with high rates of poverty. However, for those with long-standing Social Registries, a key question arises as to whether it makes more sense to continue with infrequent nationwide registration waves (which can be quite costly), or whether to invest resources in building capabilities for dynamic inclusion, particularly the network for citizen interface, that permit people to register and update their information at any time.
- Finally, the architecture of Social Registries **as information systems** varies significantly in terms of the structure of data management and the degree of interoperability with other administrative systems. Some countries operate “self-contained” systems with little-to-no interoperability with other systems. Examples include: Yemen’s SWF, Djibouti’s RSU, Mali’s RSU, Senegal’s RNU, Sierra Leone’s SPRINT, Indonesia’s UDB, and the Listahanan in the Philippines. This approach is generally more feasible in countries with limited capacity or those “starting from scratch.” However, the challenges can involve stale data and limited means for verifying or validating data for errors. Other countries operate “centralized” data store with little-to-some interoperability. Examples include: Dominican Republic SIUBEN, Brazil Cadastro Unico, Pakistan NSER, China’s RPHR, Macedonia CBMIS, Georgia’s TSA Registry, Mexico’s SIFODE, Mauritius’ SRM, Azerbaijan VENTAS, Colombia’s SISBEN, and Montenegro’s SWIS. This approach is more feasible in countries that have some existing capacity and are improving their ability to support more advanced information systems implementation, including interoperability capabilities. In addition, two countries in our sample operate centralized data stores, but with *considerable* interoperability: Chile’s RSH / SIIS and Turkey’s ISAS. This model is more feasible in countries that have built in-house capacity and have strengthened their ability to support more sophisticated information systems, with interoperability and integration frameworks. Advantages include improvements in updating, validation and verification of data and other efficiency gains. Finally, other countries operate “virtual” Social Registries using data virtualization technologies within an agile and highly interoperable framework for whole-of-government. Although none of the countries in our sample have adopted this model, countries such as Jordan and Egypt are experimenting with this approach, which is already being used in Belgium’s Crossroads Bank for Social Security (CBSS).

Clearly, the typology of Social Registries varies significantly across countries – and these systems are all evolving over time along diverse trajectories. The “starting points matter” and no single model would fit every country’s context, structures, capacities, and needs. Nonetheless, there are basic building blocks that are common across most Social Registries, and these can be assessed using a “checklist” style Assessment Tool found at the end of this paper.

Chapter 1: Introduction

A. Setting the Stage

Many countries offer a myriad of social benefits and services to meet the diverse needs of their populations. Social benefits can include cash transfers (conditional or unconditional) targeted to poor and vulnerable families or individuals (e.g., women, children, disabled, elderly), near cash transfers such as food stamps, subsidized health insurance, subsidies (transport, utilities), in-kind benefits (such as nutrition supplements, school supplies), in-work benefits, unemployment benefits, caregiver allowances, and so forth. Services can include family services; intermediation counseling and psycho-social support services; ECD, child care and child protective services; services for at-risk youth; training and skills programs; active labor market and activation services; financial and productive inclusion services; legal services; social and long-term care services, and so forth.

Many of these benefits and services involve Social Protection and Labor (SPL) programs that help buffer people from shocks and equip them to improve their livelihoods and create opportunities to build a better life for themselves and their families. SPL programs generally include social safety nets, social insurance and pensions, and labor market programs and services. SPL systems and programs evolve in complexity over time – and the mix of instruments greatly depends on the country context and “starting point.”²

In this context, a key question is “how?” How and where do people register for potential inclusion in these programs? How is eligibility determined? How do programs make enrollment decisions? How are cash benefits channeled to beneficiaries? How are services provided? These are all critical implementation phases for social programs, with citizens, institutions, and information systems interacting all along that delivery chain.

One key aspect involves access: how to manage intake, registration, and determination of potential eligibility in ways that promote inclusion (coverage and equity), efficiency (for people and providers), accuracy, and transparency? This is the function of Social Registries, which are the focus of this paper. Social Registries³ are information systems that support outreach, intake, registration, and determination of potential eligibility for one or more social programs. While there are many technical aspects involved in designing and implementing Social Registries, their role in social policy is actually quite simple: to provide a “gateway” for potential inclusion of intended populations into social programs.

- **For Citizens,**⁴ this typically means knowing when and where they can “apply” (register) for potential inclusion, what is the process, what information and documents they will need to provide, how they can check on the status of their application or file a grievance, and when they will be notified of eligibility and enrollment decisions. It also means knowing when and where to update their information, and whether or not they can register at any time – particularly if their situations worsen. If multiple programs require separate applications, then citizens will have to navigate the bureaucratic maze and provide similar information and documentation multiple times – often at different locations. If multiple programs use

² See The World Bank (2012).

³ The terminology for Social Registries varies across regions and the development community. Some other names include: registration and eligibility systems, single registries, unified registries, “social cards,” beneficiary systems, household targeting systems, “SP databases,” management information systems (MIS), and so forth. In this paper we seek to clarify this terminology, defining Social Registries according to their functions, and overcoming “terminology confusion” by aligning with terminology on information systems that is consistent with the IT world.

⁴ In this paper, we use the term “citizens” not to refer to nationality status, but rather to refer to people (individuals or families) in a country. This is consistent with the terminology used in the “citizen-centered” service approaches that have been adopted in many countries. When citizens (people) register in Social Registries, they can be called “registrants,” “applicants,” or “potential beneficiaries.” When they are enrolled in specific programs, they are called “beneficiaries.”

common intake and registration “gateways” (as “Integrated Social Registries”), citizens can potentially gain access to a broad array of benefits and services, with far fewer transactions costs.

- **For Administrators**, key functions include reaching out to intended populations to inform and reach them for intake and registration, collecting information and documentation from citizens (usually via application questionnaires taken in person or online, interviews, and possibly home visits), entering and managing the information, cross-checking for consistency and accuracy (including with other information systems), assessing potential eligibility against program-specific eligibility criteria, managing complaints and grievances, and so forth. These processes can be costly, particularly if social programs carry them out separately. Harmonizing expensive steps, such as intake and registration, can generate efficiencies and cost savings when multiple programs use an Integrated Social Registry – even if they each use program-specific eligibility criteria. Data validation and verification, oversight and controls, and interoperability can also boost information quality and accuracy.
- **For Social Policy more broadly**, common gateways (Integrated Social Registries) can help coordinate efforts to reach intended populations, thereby facilitating synergies across programs aiming to deliver complementary benefits and services to common groups. In fact, Social Registries can serve as a powerful platform that can extend well beyond social assistance programs, supporting determination of potential eligibility for other interventions, such as subsidized health insurance, social energy tariffs, education and training vouchers, subsidized child care, financial inclusion services, pro bono legal services, and so forth. Social Registries can also promote inclusion, by providing access to social programs by poor and vulnerable populations, giving them access to a broader set of social benefits and services that may not otherwise be accessible for those on the bottom of the economic distribution. When Social Registries allow for continuous registration at any time, these “dynamic gateways” can facilitate progressive realization of universal access to social protection. Indeed, many core features of Social Registry can be designed in compliance with human rights standards, including the principles of non-discrimination, transparency and access to information, and accountability.

In addition to supporting registration and eligibility functions, the data produced by Social Registries are also used by countries for other purposes, such as calculating benefit levels (e.g., for health insurance subsidies or cash transfers), validating information collected through other methods or sources, assessing potential demand for interventions, planning and costing interventions depending on projected coverage rates, monitoring and evaluation, or other analytics purposes.

B. Objectives, Basic Premises, and Value Added of this Paper

This paper has three main **objectives**: (a) presenting a “Guidance Note” on the framework for Social Registries; (b) illustrating the diverse typologies and trajectories of country experiences with Social Registries; and (c) developing a basic “Assessment Tool” covering the core building blocks of Social Registries using a “checklist” style of questions, recognizing that there is no single model or blueprint and that these systems evolve over time.

Although the paper is focused on Social Registries for “social assistance,” it emphasizes that they have been used for multiple benefits and services that extend well beyond social assistance in many countries. This social policy role also pivots, however, on the ability of Social Registries to serve as “dynamic gateways” for continuous inclusion.

This paper builds on existing literature (see bibliography) plus “live case” knowledge of, or direct involvement in, a diverse array of Social Registries in numerous countries – by the authors or fellow World Bank staff, working closely with registry administrators. It builds on **three key basic premises**:

- (a) The definition of Social Registries is anchored in their *functions* along the Delivery Chain for social programs, highlighting their role in supporting the implementation phases of outreach, intake & registration, and

assessment of needs and conditions to determine potential eligibility for inclusion in selected social program(s);

- (b) We clarify terminology that is consistent with both *social policy* and with *IT standards*, thus overcoming the significant “terminology confusion” that has plagued social protection experts and the development community, both within and among themselves and in working with IT professionals for the development of these information systems;
- (c) We recognize that there is considerable *diversity in country experiences* with Social Registries, and thus a broad range of typologies and trajectories in terms of their social policy roles, basic architecture, and institutional arrangements.

With those basic premises, this paper brings **value added** to the knowledge base on Social Registries by:

- (a) Elaborating on the social policy role of Social Registries as *inclusion systems*, and as their operation as *information systems*;
- (b) Illustrating the *diverse typologies and trajectories* of country experiences with Social Registries in terms of three key features: (i) central and local institutional arrangements; (ii) characteristics of their role as inclusion systems: coverage, integration for use by multiple programs, and dynamic inclusion for access to intake, registration and updating by anyone at any time; and (iii) characteristics of their architecture as information systems: degree of interoperability with other systems and structure of database management.
- (c) Developing basic guidance on the “*nuts and bolts*” aspects of, and core questions for assessing, Social Registries, recognizing that there is no single model or blueprint and that these systems evolve over time.

C. Delineating the Boundaries of this Paper

As information systems that support registration and determination of potential eligibility for social programs, Social Registries have important links to “upstream topics,” such as the design of eligibility criteria, and “downstream topics,” such as the management of social benefits (payments administration, case management and so forth). It is beyond the scope of this paper, however, to get into depth in either of these topics.

Upstream Topics: “Targeting” & Eligibility Criteria. Eligibility criteria for social programs vary, and are program specific. Programs can be universal, such that the entire population is eligible. Programs can be geographically targeted, such that the entire population living in a selected area is eligible. Programs can be categorical, such that anyone with certain characteristics as age, gender, or disability status are eligible. Programs can be “targeted” according to the “welfare” of an individual or of a family/household, which can be measured in monetary terms (as income or consumption) and/or non-monetary terms (as assets index, possession of certain goods, or other socio-economic variables). When social programs are targeted, formal eligibility criteria are established, using some form of means testing (when they can be measured and verified), hybrid-means testing (when income information is complemented with an estimation assets or other for non-verifiable welfare measures), proxy means testing (PMT, when welfare is estimated via a combination of proxy variables, due to high levels of informality or prevalence of non-verifiable measures), multi-dimensional poverty indices, or other measures of socio-economic status that can be correlated with welfare status. Social programs can also combine eligibility criteria, for example, channeling benefits to the poor elderly (combination of categorical plus targeted criteria) or to the poor living in a particular area (combination of geographic plus targeted criteria).

As *inclusion* systems, Social Registries are useful tools for supporting intake, registration, and assessment of needs and conditions against program-specific eligibility criteria. The literature on the design and effectiveness of these different criteria is extensive, and this paper does not dive into analysis or discussions of those topics.⁵

⁵ See Ravallion (2000, 2008, 2009, 2016); OPM and IDS (2011); Alatas et al (2012); Pop (2015); Del Ninno and Mills (2015); Alatas et al (2016); Brown, Ravallion and van de Walle (2016)

Rather, it takes the eligibility criteria for specific programs as *given*, and focuses instead on the “how-tos” of Social Registry systems. Given the pre-defined selection of eligibility criteria, Social Registries do involve building and operating business rules and logic to incorporate these criteria for the assessment of needs and conditions in order to determine potential eligibility for social programs in practice. Beyond this paper, one potential direction for future research would be to examine how the design of these eligibility criteria could be influenced by improvements in capacities and technology used in Social Registries.

Downstream Topics: Benefits administration and Integrated Social Information Systems. Social Registries support the processes of outreach, intake and registration, and assessment of needs and conditions for the determination of potential eligibility for social programs. As such, the information included in Social Registries covers the population of *all registrants (applicants)*, not just those selected as beneficiaries for a particular program. Conceptually and functionally, Social Registries are thus distinct from “Beneficiary Registries” or benefits administration systems, which support the processes of payments transactions, service delivery, or program case management. Clearly, these systems are linked – and they are not always developed separately. In fact, when a Social Registry is designed to serve just one program, it may be developed as a core module of the broader information system used to manage that program – albeit with the population included in the Social Registry covering all registrants (applicants), whereas the population included in other modules of that information system covering just selected beneficiaries. When an Integrated Social Registry serves multiple programs, information on potential eligibility for specific programs would be channeled to the specific information systems used for managing those programs.

Many countries have developed Integrated Social Protection Information Systems, which integrate functional modalities for Social Registries (supporting intake, registration, determination of eligibility), Beneficiary and Benefits Administration, Payments Administration, Case Management (including conditionalities monitoring), Grievances and Appeals, Business Intelligence, and Interoperability with other systems. While it is beyond the scope of this paper to discuss these systems in depth, this paper does illustrate how Social Registries would interact with Beneficiary Registries, and how they would be situated within these broader Integrated Social Protection Information Systems.

D. Road Map to the Paper

This paper is structured in three broad parts:

- **Part 1 (Chapters 2, 3, 4) presents the framework for Social Registries.** Chapter 2 reviews the basic concepts and terminology around Social Registries. Chapter 3 dives deeper into the functioning of Social Registries as inclusion systems, and reviews the social policy role of “Integrated Social Registries” to serve as common “gateways” for multiple programs, as well as the role of Social Registries in supporting dynamic inclusion of the poor and vulnerable, highlighting the relevance to the human rights agenda and the progressive realization of universality of social protection, which holds that anyone who needs social protection should be able to access it at any time. Chapter 4 discusses the architecture of Social Registries as information systems, and their role within the context of broader Integrated Social Protection Information Systems. In this section, country examples are included to illustrate specific points, such as processes or structures, either through boxes or passing references.
- **Part 2 (Chapters 5 and 6) reviews cross-country experience with Social Registries, reviewing the framework “in practice.”** This section draws on direct World Bank staff experience with “live case” country engagements and primary reference materials from numerous countries. Although the study focuses primarily on the Social Registries in 20 countries, including: Azerbaijan, Brazil, Chile, China, Colombia, the Dominican Republic, Djibouti, Georgia, Indonesia, Macedonia, Mali, Mauritius, Mexico, Montenegro, Pakistan, the Philippines, Senegal, Sierra Leone, Turkey, and Yemen, it also draws on the examples of Social

Registries in other countries are also included to illustrate specific points (e.g., for Kenya, Rwanda, Nigeria, Egypt, Jordan, Vietnam, India, Estonia, Belgium, the US, Canada, Australia and others). Building on this experience, [Chapter 5](#) illustrates the diverse typologies and trajectories for Social Registries, in terms of: (a) institutional arrangements (central and local); coverage; (b) coverage (c) social policy roles; and (d) degree of interoperability with other systems. [Chapter 6](#) gives a brief overview of the types of costs that may be involved in developing and operating Social Registries. Annex 1 serves as an anchor for these chapters on cross-country experiences, with an overview of each of the Social Registries in each of these countries.

- **Part 3 (Chapter 7) presents the Assessment Tool.** Specifically, [Chapter 7](#) presents guidance on the basic building blocks of Social Registries, as well as a “checklist” style set of questions for assessing these nuts and bolts. Given the wide diversity of Social Registries in their role in social policy and their architecture, the Assessment Tool is not meant to be prescriptive, nor is it advocating for any specific model or blueprint for Social Registries. Moreover, the checklist is not meant to be exhaustive – and not all questions will be relevant for all systems and contexts. Any diagnostics or recommendations that emerge from its application will be country specific.

It is important to emphasize that these Social Registries are highly diverse across countries. Moreover, these systems evolve over time – and the “starting points” matter. As such, the paper presents information on country cases using the latest information available at this point in time, usually covering the most recent structures from the period circa 2015-17. Inevitably, these systems will continue to evolve, and as such, the country examples will gradually become “out-of-date.” As such, they are included primarily to illustrate specific aspects of Social Registries (in Chapters 3 and 4) or cross-country patterns in these typologies and trajectories (in Chapter 5). Their illustrative value will hopefully remain, however, in terms of the specific processes and patterns being explained. Moreover, the overall framework of the Guidance Note and Assessment Tool would be expected to have longer shelf-life, as the functions of outreach, intake, registration, and determination of eligibility have always been part of the delivery chain for most social programs and their supporting systems.

Chapter 2: Terminology: What are Social Registries?

So, what are social registries? What do they aim to do? How does this relate to delivering social programs and services? How do they operate? How are they structured? ***Succinctly, Social Registries are information systems that support outreach, intake, registration, and determination of potential eligibility for one or more social programs.*** They have both a social policy role, as *inclusion systems*, and an operational role, as *information systems*. This Chapter seeks to clarify the definition and concept of social registries on two these levels.

A. Social Registries are Inclusion Systems

In terms of their core social policy function, Social Registries are inclusion systems.⁶ They provide a “gateway” for people (individuals, families) to register and be considered for potential inclusion in one or more social programs based on an assessment of their needs and conditions. That assessment usually takes into account

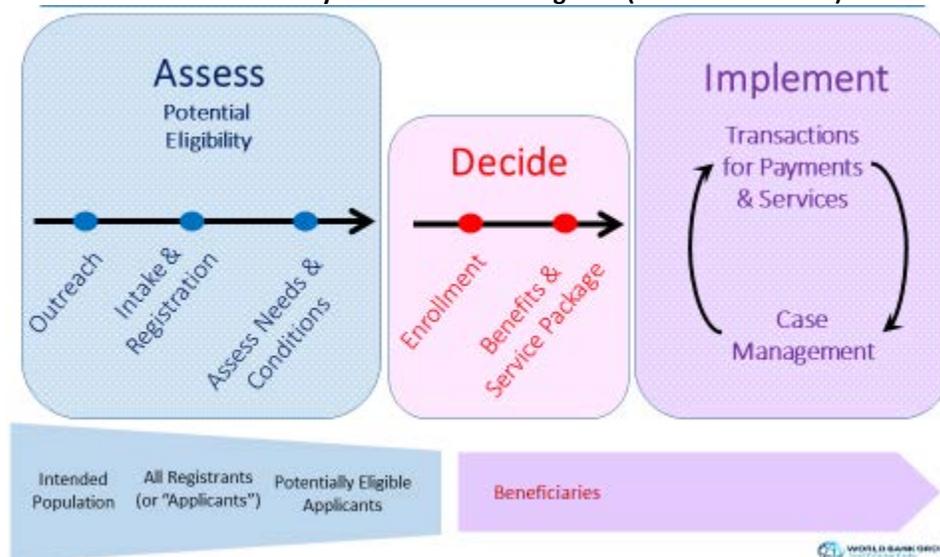
⁶ Interestingly, although the objective of Social Registries is to promote *inclusion* of intended populations, the driving force behind the development of some of these systems was actually the need to curb corruption or reduce inclusion errors and *exclude* those who should not be receiving benefits. This emphasis on excluding unintended potential beneficiaries (and thus reducing errors of inclusion) is more prominent with Social Registries that support a single program that is narrowly targeted to specific groups. However, as many Social Registries have shifted towards supporting multiple programs, and even interventions that tend to be universal in nature (such as subsidized health insurance and others), the coverage of Social Registries has expanded greatly to support their role as *inclusion systems*. Moreover, since enrolment decisions are taken by user programs according to their own criteria (shown in the pink shaded section of Figure 1), those “targeting decisions” are not specifically in the purview of the Social Registry.

measures of socio-economic status, categorical factors or a combination of both, which are often factors used by programs in prioritizing eligibility for benefits and services.

More specifically, from a functional perspective, Social Registries are information systems that support registration and determination of potential eligibility for social programs. Along the “Delivery Chain,” they support the phases of outreach, intake & registration, and assessment of needs and conditions to determine potential eligibility for inclusion in selected social program(s) (the blue shaded panel of Figure 1). Social Registries can serve one or multiple programs, as discussed in more detail below. These functions require structures and processes for citizen interface, for example via mobile teams, at local offices, or via digital service windows. They also require clear legal and institutional arrangements, including designation and capacity of the “host agency” for developing and operating the Social Registry, as well as for agencies managing the user programs. Finally, as information systems, Social Registries intermediate as a bridge between citizens on the one hand, and institutions (Social Registry operators, social programs) on the other hand.

In terms of population covered, social registries contain information on all registrants, whether or not they are deemed eligible for, or enrolled in, select social programs. In this paper, people (individuals, families, households) that are registered in Social Registries are referred to as “registrants” or “applicants.” A key feature of social registries is that they maintain information on all those who register – whether or not they are determined eligible for social programs. This feature is important for many reasons. First, it allows for the Social Registry to serve multiple programs, which may have different eligibility criteria or thresholds. Second, it allows for transparency and social accountability in the determination of eligibility and record-keeping. Such information is needed to allow people to file appeals or grievances and support eventual reviews of their potential eligibility for social programs. Third, these data support the use of the Social Registry for policy analytics, such as monitoring inclusion, planning and costing of interventions, assessing potential demand for social programs, program monitoring and reporting, analytics, and so forth. In other words, the population covered by Social Registries includes all potential beneficiaries of SPL programs defined as the intended population to be treated under the system.

Figure 1 – Social Registries Support Determination of Potential Eligibility within the Delivery Chain for Social Programs (blue shaded areas)



Source: Authors, and as developed in forthcoming companion paper on SPL Delivery Systems (Lindert & George, 2016).

Importantly, Social Registries are distinct from “Beneficiary Registries,” both in function and in population coverage (Box 1). Both Social Registries and Beneficiary Registries are related components of broader

information systems for managing social programs, as discussed further in Section 4.B below. Yet the two are distinct in several ways, and it is important to not confuse these terms. In terms of *purposes*, Social Registries have the function of registering individuals, families or households (called “registrants” or “applicants”) and determining potential eligibility for social program(s), as shown in the blue shaded panel of Figure 1. In contrast, Beneficiary Registries track information on beneficiaries and benefits to support program management and implementation (payments, case management, conditionalities monitoring, grievance redress; see pink and purple shaded sections of Figure 1). In terms of *population coverage*, Social Registries gather and retain information on all registrants (applicants), whether or not they are eventually enrolled in social program(s) since there is no guarantee that application or registration in the Social Registry would provide any entitlement to a program. In contrast, Beneficiary Registries maintain information only on beneficiaries of specific program(s). As such, by definition, Beneficiary Registries would not be used for “targeting decisions” or determination of (potential) eligibility for programs because they only contain information on people or households who have already been deemed eligible for, or enrolled in, the program.⁷

However, it is important to note that Social Registries are not necessarily developed as “separate entities” from broader information systems for social programs. As shown in Figure 1, Social Registries support key “upstream” processes along the Delivery Chain for a single or multiple social programs. In some cases, these Social Registries are developed as specific modules of broader information systems. In the case of a single social program, they may be embedded in the end-to-end functions and information system for that program. This situation is common when a program beneficiary registry starts to evolve towards a Social Registry in terms of functions, and even branches to serve other programs. And in some cases, the program(s) remain the point of entry: people apply for benefits of a particular program and may then be considered for potential eligibility for other programs. In other words, implementation phases such as outreach, intake, and registration may be managed through a specific program, and the Social Registry may not be managed as a separate entity per se. Examples of various models of Social Registries – both as separate entities and as embedded functions – are included in subsequent Chapters of this paper (particularly in Chapters 3 and 4).

On a related note, it is important to highlight that not all countries operate Social Registries. Some countries (or programs) do not record information on all applicants for a social program(s). They don’t use Social Registries to support the functions of intake, registration, and assessment of needs and conditions to determine potential eligibility for social programs. Rather, they gather information only on beneficiaries, on the basis of enrollment decisions that are taken “outside the system.” For example, with community-based targeting mechanisms, communities or local councils take enrollment decisions without recording information on all potential beneficiaries. Instead, once these enrollment decisions, information on beneficiaries is recorded in beneficiary registries and used in benefits administration systems. One downside to this approach is that the lack of records on all applicants (or potential beneficiaries) prevents social accountability mechanisms such as grievance redress systems to manage appeals and other complaints by those who are not enrolled as beneficiaries in social programs.

⁷ One exception to this is if the Beneficiary Registry for one program is used as the basis for determining eligibility for another program (i.e., those eligible for program X will be considered for eligibility for, or be guaranteed access to, program Y).

Box 1 – Distinct Features & Roles of Social Registries vs. Beneficiary Registries

| | Social Registries | Beneficiary Registries |
|-------------------------------|--|---|
| Purposes | Registering individuals, families or households (called “registrants” or “applicants”) and determining potential eligibility | Tracking beneficiaries and underpinning program management including benefits administration payments, case management, conditionalities monitoring |
| Population covered | All registrants (applicants), whether or not they are deemed eligible for social program(s) | Beneficiaries only |
| With Multiple Programs | Social Registries can serve as a common registration and eligibility “gateway” for people to apply for multiple programs. These are called Integrated Social Registries . | With multiple social programs, some countries link back-office administrative information in beneficiary registries across programs, using interoperability frameworks, to help deliver “bundles” of benefits and services. This can facilitate coordination of program delivery, tracking beneficiaries of multiple programs, identifying synergies or gaps in provision, detecting duplications and/or fraud, and joint monitoring and reporting. These are called Integrated Beneficiary Registries . |

Source: authors

Social Registries are also distinct in function from population or family registries, although they can have important synergies.⁸ Countries operate various types of “registries,” each with their own specific objectives and functions. *Population registries* are individualized information systems that serve as a continuous “real-time” recording of selected demographic information pertaining to each member of the resident population of a country, including date and place of birth, sex, date and place of death, date of arrival/departure and citizenship. Some countries maintain *family or household registries*, which are civil registries used to track individual ties to families, such as births, deaths, marriages, divorces, and so forth. Typically, population and household registries do not collect socio-economic information that would be used to determine potential eligibility for social programs. Nonetheless, where population and family registries exist and are maintained with full coverage and accuracy in real time, Social Registries can derive important synergies from these valuable sources of updated information on individual and household demographics.

B. Social Registries are Information Systems

Operationally, Social Registries are information systems. This has been a source of confusion in the literature, and between the SP and IT worlds. Some of the confusion stems from the tendency to define social registries as “mere databases,” implying separate software applications to systematize and transform information. This is because the term “registry,” can imply “a database or place where information is kept.” This separation of the “database” and software applications results in confusion between development practitioners and IT experts. It is also problematic because Social Registries do not function in isolation as “just a database” without complementary software applications and business logic. Rather, we avoid this separation recognizing that a Social Registry is a “brand name” that is defined by the *function* as an information system that collects, organizes, stores, processes, transforms, creates and distributes information for the predefined purpose of supporting outreach, intake and registration, assessment of needs and conditions, and determination of potential eligibility for social programs (as discussed above). To accomplish those predefined goals, Social Registry Information Systems (or “Social Registries” in shorthand) make use of a variety of system elements, namely: (a) data and

⁸ Palacios (2014).

information; (b) software; (c) database management; and (d) ICT infrastructure, as well as institutional aspects (people, procedures, documentation, etc.), as discussed in more detail in Chapter 4.

Indeed, information is the core input and output of Social Registries. The main “inputs” to the system include various types of information needed to determine potential eligibility for social programs, and for this reason many end up calling the Social Registry a database. The specific data *content* is usually determined by the eligibility criteria applied by the various “user programs” (one or multiple programs), depending on whether they are using means and asset testing, proxy means testing, multi-dimensional poverty indices, other measures of welfare, individual characteristics, or a combination of criteria. Such information typically includes:

- (a) Identifying information and household composition, such as name, birth date, gender; relationship with household head; marital status; unique identifiers such as a national or functional ID number;
- (b) Geospatial identifying information on the location of the household, including address and other contact information, as well as GPS geo-coding information (where possible);
- (c) Socio-economic status such as self-reported and/or verified information on incomes for each household member; education, and employment status of each individual;
- (d) Information⁹ on housing and assets, such as housing characteristics (e.g. type of housing material, connection to water, electricity, and so forth), self-reported and/or verified information on assets (e.g. vehicle, land, livestock, etc.); and
- (e) Other information depending on the purpose of the Social Registry (such as disability status, access to services, health, food security status, registration with employment agencies, etc.).

The primary “outputs” of social registries are data that have been transformed into standardized formats or aggregations that permit assessment of needs and conditions against program eligibility criteria (such as means-tested incomes, proxy means scores, etc.). These “outputs” can vary across multiple program users if they have different eligibility criteria or thresholds – as long as the data are gathered by means of the Social Registry and the user programs share common “data dictionaries” and concepts for the variables included.

Chapter 3: The Functioning of Social Registries as *Inclusion Systems*

This Chapter dives deeper into how Social Registries function as *inclusion systems* (whereas the next Chapter elaborates on their operation and structure as *information systems*). It opens by unpacking the basic functions of Social Registries, illustrating how various functions and processes along the delivery chain can be mapped to specific actors. The Chapter then explores the potentially powerful social policy role of an Integrated Social Registry serving as “common gateway” for multiple programs - in social protection and beyond. It also examines the degree to which Social Registries serve as “dynamic gateways” for continuous inclusion such that they allow anyone to register or update their information to be considered for potential eligibility for social programs at any time.

A. A Deeper Look at Basic Functions of Social Registries along the Delivery Chain

As discussed above, the starting point for defining Social Registries is based on their core functions along the Delivery Chain. Specifically, Social Registries support outreach, intake and registration, and assessment of needs and conditions to determine potential eligibility for social programs. These are broad implementation phases. As “business processes,” each phase has several activities supporting the major task of the phase. Each activity

⁹ Such information sometimes includes (geo-coded) photographs of dwellings and assets, which can help with verification and quality of data. Consent should be obtained to take and use photographs in this way.

has inputs from the previous phase and outputs to the subsequent phase. These phases can be further broken down into additional steps that define specific details regarding how each phase works, what triggers it, what inputs and outputs are needed, and so forth. Some of these functions involve the “front office” – such as outreach, intake and registration – whereas others are primarily “back-office” functions – such as assessment of needs and conditions to determine potential eligibility for social programs.

Outreach

Outreach fosters basic awareness and understanding about the role and functioning of the Social Registry and its relation to social programs. A key aspect of outreach involves communication, to inform the intended population about possible social programs that they may be eligible for – and to inform them about the processes for registering in the Social Registry. If registration processes serve just one social program, then the communications would focus on the main features of that program (objectives, eligibility criteria, rights and responsibilities). If the registration processes are “common” or “shared” across programs (as in the case of Integrated Social Registries, as discussed below), then the communications need to cover the main features of those diverse programs (objectives, eligibility criteria for the various sets of programs, and so forth). In either case, communications should clearly emphasize that simply registering is no guarantee of eligibility or enrollment for that program or set of programs. And, such communications should clearly explain the processes involved in the Social Registry, including the registration process (interview, home visit, questionnaire or application form), the type of information and documentation that would be needed, the processes for notification of potential eligibility or enrollment in social programs, processes for grievances and appeals, and so forth. Strategic communication tools can also be used to build broader awareness about the social policy roles of Social Registries as inclusion systems (see Box 2 for examples).

Active Outreach can be essential for promoting potential inclusion of marginalized groups – for eventual consideration of eligibility for social programs. If the Social Registry is to serve its “inclusion” role, it is important that it cover as many potential recipients of social assistance (or other “user programs”) as possible. Active efforts are often needed to proactively reach out to marginalized groups, such as indigenous populations, homeless families, the disabled, and so forth, who may otherwise be excluded. Active outreach efforts are particularly important with “on-demand” intake and registration methods since such marginalized populations may be unaware of the processes for intake and registration in Social Registries as gateways for potential inclusion in social programs. Even with *en masse* registration approaches, key population groups can be missed without special active outreach methods. Countries have used a variety of active outreach strategies (see Box 2 for examples).

Box 2 – Outreach and Communications in Social Registries

Countries have used a variety of active outreach and communication strategies to build awareness and understanding of Social Registries among stakeholders and reach out to marginalized groups who may otherwise be excluded. Some examples include:

“Busca Activa” in Brazil’s Cadastro Único. Brazil’s Social Registry the Cadastro Único (*Cadúnico*) has operated on an on-demand basis since 2007. This means that anyone can come register and apply for benefits from the *Bolsa Família* Program and many other benefits and services that use the *Cadúnico* as an integrated gateway – at any time (dynamic inclusion). By 2012, over 22 million families had registered into the *Cadúnico* (about 40% of the population). However, the Ministry of Social and Development (renamed to Ministry of Social and Agrarian Development in 2016) was concerned that the program was missing some extremely poor families, particularly hard-to-reach groups such as indigenous and other ethnic communities, the disabled, the homeless, those living and working in trash dumps, people working in extractive industries, fishermen, people living in remote areas, and so forth. As such, the Government developed an Active Search strategy under its “*Brasil Sem Miséria*” (Brazil Without Poverty) initiative with the goal of finding and registering all extremely poor families that had not yet been included in the *Cadúnico*. This new outreach strategy was developed and implemented at the municipal level, with financing of a specific plan from the federal government. The strategy followed an active search process based on the philosophy that it was the responsibility of the state to go to high-poverty areas to find the poor who may otherwise be missed in the Social Registry, rather than waiting for them to enroll on demand. More specifically, the efforts targeted specific populations – whose under-registration in social programs had been identified through statistical analysis that combined poverty maps and administrative data from the *Cadúnico*. The strategy included door-to-door visits by social workers, visits of mobile “social assistance” vans to remote localities, as well as partnerships with government and civil society agencies following a snowball approach that first visited a household enrolled in the *Cadúnico* to inquire about friends or families not enrolled, so that they could start finding those families. Partners included health community agents and even electric power concessionaires. The principle was: for populations that were not able to “pursue their rights,” the “rights would find them.” Locations used for registering the poor included schools. The initiative was a success and resulted registering more than one million additional extreme poor families into the *Cadúnico* over the span of a year. All of these newly registered families had previously been excluded from social programs, and most were deemed eligible based on an assessment of their needs and conditions in the *Cadúnico*, thereby facilitating their enrollment in social programs, including *Bolsa Família*.

Mexico: In the case of Mexico, the administrators faced a different challenge of outreach in urban areas. After several experiences with disappointing results in the take-up by the urban population, a strategy was implemented which included determining the location of temporary registration centers by careful analysis of data and estimates of the potential population. Mexico also introduced traveling units that organized meetings with small groups to explain the registration process.

Outreach & Strategic Communication for the *Listahanan* of the Philippines: In the case of the Philippines, registration into the *Listahanan* (national household targeting system) is carried out using *en masse* data collection efforts once every few years. Even with these “census-sweep” approaches, there is always the risk of missing marginalized, remote, or otherwise hard-to-serve populations. During the recent nationwide data collection effort in 2015, the Department for Social Work and Development (DSWD) developed an active outreach strategy that involved close cooperation with local governments to assist enumerators in penetrating remote and hard-to-reach populations, including with mobile teams on small boats, canoes, and other forms of adaptive transportation. Special efforts were also made to reach people living in trash dumps without a fixed address. The *Listahanan* has also set a global example in the use of strategic communications to build awareness and understanding. This was particularly important due to previous misunderstandings of the role of the household targeting system vs the Pantawid conditional cash transfer program, which was the flagship program managed by DSWD. As the *Listahanan* moved to serve as an Integrated Social Registry for multiple programs, it was imperative that people would understand its distinct role as an inclusion system for consideration of potential eligibility for multiple programs, as well as the process for intake and registration. DSWD market-tested and adopted a clear branding (logo and tagline) for the *Listahanan* that conveyed its objectives as an accurate and objective system of inclusion. DSWD also developed innovative communication strategies for various stakeholders.

Intake & Registration

Intake and Registration involves the process of collecting self-reported information and documentation to register the intended population for consideration of potential eligibility for social programs. This phase represents the formal entry point into the Social Registry system. It includes several key elements, including: (a) data collection and entry; (b) questionnaire and supporting documents; and (c) the interview process and home visits.

The specific *methods* used for intake and registration vary. Data collection can be “supply driven,” “demand-driven,” or a mix. With “supply-driven” approaches, individuals or families haven’t asked to be registered or “applied for benefits.” Rather, field teams typically come to them with registration questionnaires that are applied “*en masse*” to all or most individuals or families in a particular community or region, usually via door-to-door methods. This approach aims to ensure inclusion of populations that may otherwise be missed, particularly when active outreach methods are used (See Box 2). With “demand-driven” approaches, individuals or families are take the initiative to register into the Social Registry, either in person or electronically. Application forms are typically filled out on paper or electronically, and interviews are typically carried out at local offices and/or via scheduled home visits. Mixed approaches combined both supply-driven and demand-driven approaches (e.g., with active search methods that are used to ensure that marginalized groups are registered, while others apply via on-demand registration). In this paper, we refer to individuals, families, and household that are included in Social Registries as both “registrants” (which is more applicable with *en masse* registration methods) and “applicants” (which is more applicable with on demand registration methods).

Another key aspect of Intake and Registration is the *questionnaire (application form) and required documentation*. The questionnaire should gather relevant information needed to determine potential eligibility for social program(s).¹⁰ Human-centered design principles should be adopted to make the questionnaire user-friendly: not too long in terms of number of questions or time taken to administer, and easy to comprehend and navigate, both for the interviewer and for the registrants (applicants). The specific data *content* is usually determined by the eligibility criteria applied by the various “user programs” (one or multiple programs). If multiple programs use information in the Social Registry to determine potential eligibility, then core concepts and variables should be harmonized across programs such that the relevant information is collected for all programs (even if specific eligibility criteria or thresholds vary across programs), as discussed in more detail below. Key supporting documents (such as national unique identification with biometric data) are sometimes also required, but it is important to avoid excessive documentation requirements that present barriers to inclusion or impose undue time, costs, or visits that could deter people from registering. It is also important at the intake phase that everyone registered is informed of, and can give consent to, the planned use of the information and ensured of personal data protection (as discussed in more detail in Chapter 4 below).

The *interview* process, sometimes combined with home visits, is another central step in the Intake & Registration phase in many Social Registries. Interviewers must be well trained in effective interviewing techniques, culturally-sensitive adaptations, managing expectations, technology-assisted interview methods (if used), and so forth, regardless of data collection methods or the locations where registration is carried out.

Assessment of Needs & Conditions to Determine Potential Eligibility

A critical “back-office” function of Social Registries is the automation of the processes for assessing needs and conditions to determine potential eligibility for social programs. As discussed above, Social Registries collect a

¹⁰ Unless key variables can be provided via data exchange from other reliable administrative information systems.

range of information on categorical characteristics (age, gender, household composition, disability status) and socio-economic factors (incomes, employment, property, assets, education, etc.). The data required for these processes can come from (a) self-reported information from the questionnaire & interview process (intake & registration); and (b) data exchange with other administrative systems via interoperability. This information is then transformed into measures of welfare (such as means-testing, hybrid means testing, proxy means test scores, multi-dimensional poverty scores, etc.) and then compared to pre-defined eligibility criteria for user program(s) to determine potential eligibility. This process is automated through the software applications component of the Social Registry that supports the business rules and logic to carry out these algorithms.

It is important to note that the determination of eligibility by the Social Registry is distinct from enrollment in social program(s). Determination of eligibility involves assessing needs and conditions vis-à-vis basic eligibility criteria for social program(s), whereas Enrollment Decisions involves formal inclusion of eligible individuals or families in a specific program. Eligible registrants (applicants) are not always or automatically enrolled in a particular program due to: (a) budgetary limitations that can limit space and coverage such that enrollment is determined on a first-come-first served basis with waiting lists; or (b) additional criteria guiding enrollment decisions, beyond socio-economic needs & conditions, such as geographic prioritization, other categorical risk factors, etc. Moreover, the institutional jurisdiction of these phases can differ: enrollment decisions are the jurisdiction and legal responsibility of the user program(s) not the Social Registry. This is particularly important if the Social Registry is managed by a host institution that is different from the user program(s), as discussed in more detail in the next Chapter.

Processes for Updating Information

Updating of information – and reassessment¹¹ of needs and conditions – is another key function of Social Registries. Outdated or static information on socio-economic status can lead to inaccuracies in the determination of eligibility and calculation of benefit levels. The socio-economic situations of individuals and households can change in many ways in terms of: their demographics (births, deaths, marriages, divorces); addresses and location (moving residence, internal or external migration, displacement); economic status, such as incomes (lost wages, promotions, changes in pension or other benefits, changes in unearned income), employment status (job loss, newly employed, changes in employment, seasonal work); educational status (new degree or professional certification, school enrollment); health events, conditions, and expenses; housing and assets; and other factors.

The frequency of updating depends on the type of information and specific variables (content). Not all information requires updating – some variables remain constant over time (such as birth dates or places, father’s name), barring corrections to initial information. Updating of demographic information of individuals, which determines household composition, should be on-going to account for births, marriages, divorces, deaths, migration, and so forth. The updating of self-reported socio-economic data should be mandatory from time-to-time because household situations can change rapidly and unpredictably, for example, with changes in employment status, health events, crises, etc.

The periodicity of updating is also influenced by the sources of information for each variable, whether from self-reported information or from data exchange with other administrative systems.

¹¹ The literature and common practice distinguish between “updating” of demographic information and “recertification” of socio-economic information. We focus on the different frequencies, periodicity, and sources of updating for different types of variables (demographic, socio-economic), and then the “reassessment” of needs and conditions by the Social Registry without getting into certifying *enrollment* decisions, which can depend on other factors measured in the Social Registry and is typically the jurisdiction of user programs (as discussed above).

- **For self-reported information via on-demand systems**, there are two types of updates: (a) continuous partial updates; and (b) full updates for reassessment of eligibility. With respect to the former, many countries have the general requirement that households “update their information to report any changes” on a continuous basis. In practice, this usually means changes in demographic status or household composition, which can affect not only eligibility status but also benefits calculations, and sometimes major changes in socio-economic status such as employment. In some countries, such as the US or Australia, *any* changes to information must be reported within a short period of time (usually 10 business days) to avoid penalties. With respect to the latter, many countries also establish official periodicity by which registrants must be reassessed for eligibility. In Brazil’s *Cadastro Unico*¹² and Chile’s RSH,¹³ the requirement is a maximum of two years before the validity of registrant information expires. In Turkey’s ISAS,¹⁴ all data are updated and verified through an annual in-person evaluation performed by the local inspection officer. In the US,¹⁵ this time period is usually 12 months, but this can be longer for some categories on fixed incomes, such as the elderly and disabled (24 months) or shorter in some states or for categories whose situations change more frequently. Regardless of the type of information, Citizens need to know what is expected of them in terms of the frequency of updates and information / documentation required. They also need to know where and how to update their information.
- **For self-reported information via en masse registration systems**, updating and reassessment usually depends on the next round of “census sweep,” often with lags of 4-6 years, even longer in some cases. In some of these systems, citizens are supposed to report and update changes in the interim years, but few have incentives to do so and the shares of households with updated information are usually low whenever citizens are already receiving a benefit or a service. Incentives for updating only arise when households are denied eligibility for benefit/service(s). In some countries, such as Indonesia, *user programs* do carry out updates for demographic and household composition data on their *beneficiaries*, as this information affects the calculation of benefit levels. These updates are not always fed back from beneficiary registries to the social registry, however.
- **For information that is sourced from other administrative systems**, such as civil registries, tax systems, social security systems, land and property registries, utility companies, etc., the frequency of updates depends on both (a) the periodicity that the information in those systems is updated; and (b) the degree of interoperability and frequency of data exchange with those systems. With respect to the former, the periodicity of changes in information from other administration systems can vary: for example, with information on employment status or receipt of benefits changing monthly, payments of utility bills changing bi-monthly, social security contributions changing quarterly, tax information changing once a year, and property ownership changing sporadically. With respect to the latter, capabilities for interoperability and data exchange are discussed in more detail in Chapter 4.

Mapping Functions and Key Actors for the Social Registry

The institutional arrangements for Social Registries vary across countries, and there is no blueprint. As discussed in Chapter 5, some Social Registries are operated by an agency that manages a specific “flagship” social program; others are “housed” by a specialized “host agency” that serves as an operating agent. Many Social Registries are centralized in design and information management, but with decentralized or deconcentrated responsibilities for citizen interface for the “front office” process of intake & registration, updating, grievances, and so forth. Others aggregate sub-nationally managed registries into a national registry and so forth.

¹² Lindert et. al., (2007); Mostafa and Safyro (2014), and www.org.br.

¹³ Silva Villalobos, Veronica (2015).

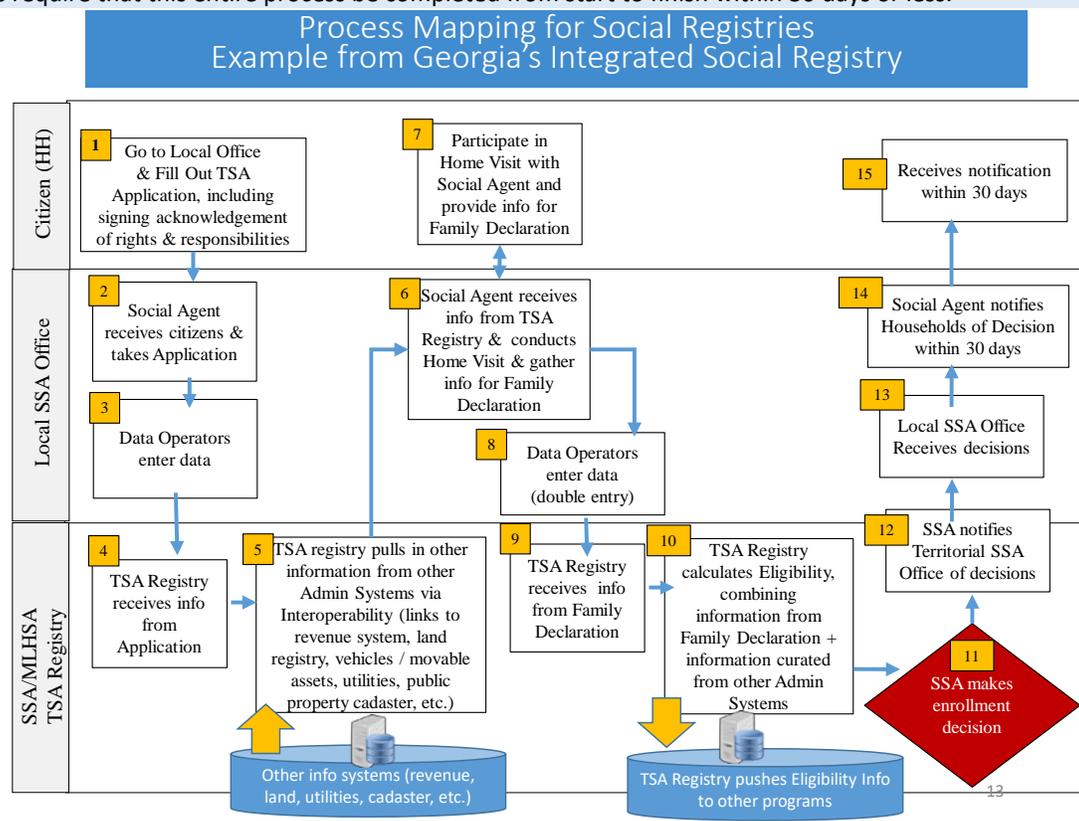
¹⁴ Ministry of Family and Social Policy (Republic of Turkey). (2017).

¹⁵ Lindert (June 2005).

Irrespective of the institutional arrangements, uniqueness of role assignments is crucial for the principles of clarity and accountability. Delivery Chain Process Mapping can be useful in establishing “who does what” and “when” for core business processes. With this tool, each actor is assigned a “swim lane,” and core business processes are mapped in sequence across those lanes. Uniqueness of role assignments is crucial for the principles of clarity and accountability – and the term “swim lanes” is used to symbolize the concept that each actor “stays in their own lane,” without crossing lanes for role confusion. Box 3 illustrates Delivery Chain Mapping for the example of Georgia’s TSA Registry, and Annex 2 provides additional details on this tool.

Box 3 - Delivery Chain Process Mapping – Example of Georgia’s TSA Registry

Delivery Chain Process Mapping can be useful in establishing and sequencing intake, registration, and eligibility processes by key actors. The Figure below illustrates this tool for the case of Georgia’s TSA Registry, which was developed in 2006 primarily to support the Targeted Social Assistance (TSA) Program, but it also provides access to potential inclusion in numerous other benefits and services (see Annex 1 and Chapter 5). The basic process is depicted in Figure 2. Households submit the initial application via the Social Agent at the reception desk of the local office of the Social Services Agency (SSA) in the Ministry of Labor, Health and Social Assistance (MoLHSA). The application includes basic information on the household, as well as consent information that the applicants sign to acknowledge their rights and responsibilities regarding data use, access, protection and so forth. Data Operators enter the information into the TSA Registry using software applications for the front office. The TSA Registry then pulls information from other administrative systems using the unique national ID and interoperability capabilities for data exchange (as discussed below). The local Social Agent then pulls up that information and conducts a home visit to the applicants’ home to gather further information for the complete Family Declaration. Two Data Operators then enter all of the information from the Family Declaration using the double-entry method to catch and remedy any errors in the process. The TSA Registry applies business rules programmed into the back-office software to calculate eligibility scores combining information from the Family Declaration and information curated from other administrative systems. This process determines if the household is eligible for the TSA Program. When a household is deemed eligible, the SSA/MoLHSA then formalizes the enrollment decision and calculates the benefits that would be paid to that household depending on their eligibility score and household composition (with additional benefits for children). The enrollment decision is then transmitted through the territorial SSA office to the Social Agent in the local SSA office, who then notifies the household of the decision. Service standards require that this entire process be completed from start to finish within 30 days or less.



Sources: SSA/MoLHSA and regional offices; Lindert (2017).

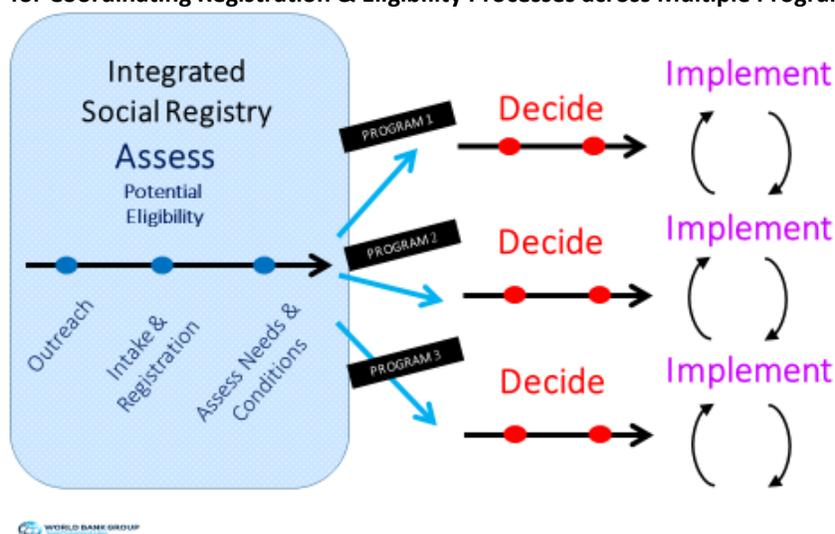
B. Integrated Social Registries as Common Gateways for Multiple Social Programs

Many countries offer a myriad of social programs, often with good intentions – but also with the risk of fragmentation. Social programs can include a range of benefits (cash or in-kind) and services. Implementation of parallel processes across numerous programs that aim to support similar population groups can be costly and

inefficient, particularly for intake and registration processes. For citizens, navigating this bureaucracy can be frustrating and costly, as they have to go to multiple different locations to apply for different benefits and services, providing the same information and documentation repeatedly, often with multiple visits. For administrators, fragmentation can result in duplication of processes, inefficiencies, and wasted resources. For government overall, fragmentation reduces capacities for coordination in social policy.

As such, “Integrated Social Registries” can serve as a common gateway for coordinating registration and eligibility processes for multiple social programs. Integrated Social Registries combine the processes of outreach, intake and registration, and assessment of needs and conditions to determine potential eligibility for these multiple programs. The agencies responsible for the social programs then make enrollment decisions, taking into account this information on eligibility plus other factors (such as budgetary space and other prioritization criteria, as discussed above), as illustrated in Figure 2.¹⁶ Key ingredients for Integrated Social Registries include inter-institutional coordination arrangements, common eligibility concepts and a shared intake questionnaire, and capabilities for information exchange.

Figure 2 – Integrated Social Registries as a Common Gateway for Coordinating Registration & Eligibility Processes across Multiple Programs



Source: Authors

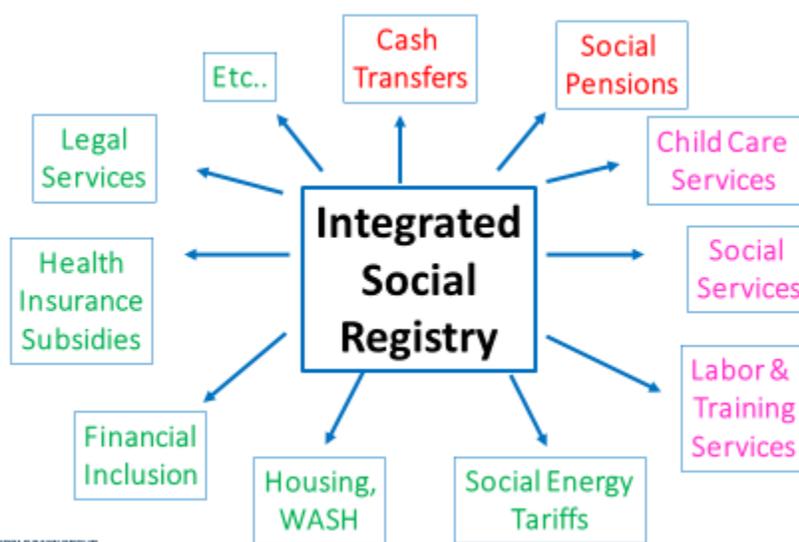
Integrated Social Registries are sometimes called “single,” “unique,” or “unified” systems. The terminology used to describe Social Registries varies considerably across countries. When they serve multiple programs, they are sometimes called “single registries,” “unique registries,” “national targeting systems,” or “unified registries.” This doesn’t mean that they are the *only* Social Registry in the country. Rather, these “brand names” usually signal that they are used “integrated gateways” for multiple programs. In fact, multiple registries can coexist – for example, a Social Registry may serve as a gateway for multiple programs, but other programs may still operate their own registration and eligibility systems in parallel (sometimes due to on-going fragmentation).

¹⁶ Note that despite the visualization of the Integrated Social Registry as a separate “entity” in Figure 2, there are many models for developing Integrated Social Registries (as discussed in Chapter 5), and not all exist as separate entities from social programs. In some countries, Social Registries are operated by agencies that manage flagship social programs (e.g., Brazil, the Philippines), but also serve programs managed by other agencies. In other countries, the Social Registry of a specific program serves other programs (e.g., Pakistan’s NSER in BISP). In some countries (such as Mexico’s SIFODE), citizens can register via a specific program but with a common application and Integrated Social Registry that can help them access other benefits and services. In other countries, Social Registries do operate as separate entities (e.g., with Colombia’s SISBEN or Dominican Republic’s SIUBEN).

Integrated Social Registries can offer many advantages – for citizens, for user programs, and for social policy. For citizens, common intake and registration procedures reduce the burden of having to navigate complex bureaucracies and provide similar information and documentation to apply for eligibility for multiple benefits and services to meet their diverse needs. For “user programs,” Integrated Social Registries can generate economies of scale, efficiencies, and savings on administration costs – which can be significant as the processes of registering and determining potential eligibility of individuals or households can be quite costly. Integrated Social Registries can also be used to support planning and costing of interventions, assessing potential demand, monitoring and evaluation, reporting, and other analytics.

As such, Integrated Social Registries serve as platforms that support access to benefits and services that can extend well beyond the sphere of social assistance. As Social Registries mature and gain credibility as “honest brokers” for quality information on a critical mass of the intended population, they gain in relevance for a larger number of social programs. In turn, the more programs are signed on to use the Integrated Social Registry as an eligibility “gateway,” the more citizens are likely to register or to be willing provide their information to become registered. As such, Integrated Social Registries can become powerful inclusion platforms for delivering a range of services to intended populations. Many of these services go well beyond social assistance, such as: social tariffs for electricity, subsidized health insurance, education and training vouchers or materials, subsidized child care, financial inclusion services, pro bono legal services, and more (as illustrated in Figure 3). Therefore, Social Registries can evolve to support many types of programs, going way beyond “targeted programs” that would aim to serve a subset of the population, and even to support universal services, such as health insurance subsidies or social energy tariffs.¹⁷

Figure 3 – Integrated Social Registries for Social Protection & Beyond



Source: Authors

C. Social Registries and Dynamic Inclusion

A key feature of Social Registries is whether or not they allow for dynamic inclusion, such that anyone can register into a Social Registry at any time. In other words, dynamic inclusion means that access to registration is open and continuous – usually with an on-demand application window for citizen interface – so that people

¹⁷ Another example is pro-bono legal services. The poor need legal services – but it would be very inefficient for the judicial system to collect the information necessary for assessing needs and conditions to determine who could qualify for pro bono legal services. Rather, needs-based eligibility for pro-bono or subsidized legal services could be informed by data from the Social Registry.

can register for consideration of potential eligibility for social programs when in need, or update their information if their situations change. This principle is also important when developing “adaptive social protection systems” with capabilities of responding to crises.

The concept of dynamic inclusion in Social Registries is closely related to the progressive realization of universality and the implementation of the human rights agenda. Many countries adhere to compliance with human rights principles, and the Sustainable Development Goals (SDGs) of the United Nations support the implementation of social protection systems and measures for all, with expanding coverage of the poor and vulnerable by 2030 (SDG Goal 1.3). The World Bank and ILO share this vision of universal social protection, *where anyone who needs social protection can access it at any time*.¹⁸ This vision is fundamentally linked to the principle and practice of *dynamic inclusion* in Social Registries.¹⁹ Integrated Social Registries can also help promote universal coverage of social protection systems by providing a gateway for potential inclusion of the poor, vulnerable, and lower-income population to a range of benefits and services that could meet their diverse needs. Interoperability between Social Registries and other information systems in the social protection sphere (e.g., pension and labor information systems) can also help coordinate universal coverage of the broader social protection system across the spectrum of the population. Other human rights standards should guide the process of progressively realizing social rights, including the principles of non-discrimination, transparency and access to information, and accountability. Importantly, there is a valuable intersection between key features that support human rights standards and those that support good practices for design and implementation of Social Registries (see Box 4).

Despite the significance of the principle of dynamic inclusion, many countries operate registries with “fixed lists” of registrants and beneficiaries. These systems are most common in developing countries, where social assistance programs are rather new, coverage is small, fiscal space constrained, and administrative capacity is limited. A typical approach is to conduct registration every four to five years. The challenge with this approach is that registration is closed to new registrants or to people whose needs and conditions have changed in the interim years between infrequent *en masse* data collection waves. As such, although these *en masse* registration waves can work well as a means to “get started” and to fill initial data gaps, the risk of errors of exclusion and inclusion increases with the passage of time, as the information becomes out-of-date and excludes households whose situations have changed or worsened and are unable to access the registry. Moreover, the risk of exclusion is multiplied when these “fixed list” static systems serve multiple programs, as they could be denying numerous benefits and services to potentially eligible individuals or households. Finally, without a system for continuous registration of new registrants (or updating of information for existing registrants), these static “fixed-list” systems are also less agile to respond in times of crises (low “adaptability”).

| Box 4: Practical Features of Social Registries that Support Compliance with Human Rights Standards | |
|--|---|
| Progressive Realization of Social Rights | <ul style="list-style-type: none"> • Dynamic Social Registry Systems facilitate access to social protection to an increasing number of individuals and families by: <ul style="list-style-type: none"> ○ Opening on-demand registration that permits anyone to register at any time (or at least during frequent open registration periods); and ○ On-going updating protocols and procedures. • Identify population in advance, expediting access to programs. • Allow efficient and coordinated approach to service delivery, which in turn facilitates the progressive inclusion of new people to the system or more benefits to those who are already in the system. |
| Principle of Non-Discrimination | <ul style="list-style-type: none"> • Facilitate access to the poor and vulnerable groups who may otherwise be missed by: <ul style="list-style-type: none"> ○ Active search and outreach, including through mobile teams, community outreach and support, social worker intermediation; ○ Simple and user-friendly application procedures; ○ Support to obtain necessary documentation and IDs; ○ Provision of translation services or applications in multiple languages with culturally-appropriate adaptations. • Sensitivity training to relevant staff, including interviewers and social workers. |
| Transparency and Access to Information | <ul style="list-style-type: none"> • Clear publication and dissemination of eligibility criteria, information requirements, application processes, use of information, and so forth. • Clear communications regarding the role of Social Registries – and the point that simply registering in the Social Registry does not guarantee eligibility for any specific social program or awarding of benefits. Rather, registration allows people to be <i>considered</i> for potential eligibility for user programs. • Communications, outreach and awareness campaigns, including with culturally- and linguistically-appropriate adaptations. |
| Accountability and Social Accountability | <ul style="list-style-type: none"> • Clear and permanent points of contact for citizen interface – ideally with multiple channels for grievances and queries (e.g., local office, hotline, online queries, etc.). • Clear and monitored protocols and quality standards for notifications and follow up. • Clear and effective grievance redress mechanisms that can distinguish between grievances regarding information provided either already registered or not in the <i>Social Registry</i>, and enrollment decision by the <i>user programs</i>. • Involvement, participation, and oversight by citizens and civil society of Social Registries (e.g., social controls) Applicant “journey mapping” assessments to trace experience of registrants and feedback learning to improve and simplify processes, and to solve problems of access for the poor and vulnerable. |
| Privacy rights and Protection of Personal data | <ul style="list-style-type: none"> • Client consent forms for endorsing clear use of information • Citizens have secure access to review own information in system – with clarity on protocols for updating and rectifying any errors • Social Registries adopt and implement internationally-accepted standards of privacy and confidentiality with appropriate technology safeguards and protocols for use of information and personal data protection. |
| Source: Garrote (2016) and authors. | |

One of the reasons that many countries operate “fixed list” systems is that many of the key ingredients for implementing dynamic inclusion systems remain elusive in their country contexts. These key ingredients include: (a) fiscal space and flexibility of user programs to accommodate new entrants and expanding coverage; (b) insufficient “political will” to remove individuals and families who no longer qualify for program benefits in order to make room for potential new beneficiaries; (c) flexible eligibility criteria that can accommodate and signal changing circumstances (such as criteria that takes into account a catastrophic health event, change in family circumstances, or sudden job loss); (d) limited administrative capacity; and (e) a digital governance

strategy that emphasizes a citizen-centered and service oriented approach, by making use of interoperable administrative systems at the national and sub-national level.

On the latter, one key administrative ingredient for putting the principle of dynamic inclusion into practice is the operation of an extensive and permanent network of access points for citizen interface. This network is needed to support the functions of continuous intake and registration, updating, and processing of grievances and appeals. In dynamic inclusion systems, these functions are often carried out on an “on-demand” basis, but active outreach efforts are also important to communicate about the role of the registry and bring in vulnerable groups that may otherwise be uninformed. Citizen interface can take many forms, but essentially what is needed is a permanent “point of contact” where citizens can access the Social Registry system on a continuous basis. Common arrangements for these “permanent access points” include operating through local offices, service windows, kiosks, or even through digital service windows over the internet. Institutional arrangements for these local offices vary: some countries operate through local government offices (as in the case of Brazil) while others via local offices and staff representing central agencies (such as in Mexico).

An extensive network of local access points for citizen interface can be *the* primary capacity constraint inhibiting the development of dynamic Social Registry systems. In many developing countries, such local capacities do not exist. In some countries, local governments do operate some administrative “service window” functions, but operating a national Social Registry through these local offices – which are often autonomous or independent of central governments – requires significant commitment and trust on both sides, formal agreements, protocols, processes, service standards, monitoring, oversight and controls, and capacities.

When capacity permits, there are potential advantages to building on-demand capabilities for dynamic inclusion. One advantage is the chance to smooth the costs of registration and updating over time, and to invest those funds in more permanent capacity for citizen interface, as discussed in Chapter 6 below. Another potential cost advantage is the reduction in total intake, registration, and updating costs due to self-selection, as citizens who are unlikely to be eligible for social programs voluntarily opt out of more dynamic on-demand systems. Finally, an additional advantage is the political gain from smoothing the turnover of eligible and ineligible individuals or families over time. The likelihood of large numbers of registrants whose situation has changed and may no longer qualify them as eligible for social programs increases with infrequent census sweep data collection approaches. The potential political cost of large numbers of people becoming ineligible all at once could be far higher in these systems, than with dynamic systems that require more frequent updating over time.

Chapter 4: The Architecture of Social Registries as *Information Systems*

This Chapter provides an overview and more in-depth discussion of the structure of Social Registries as *information systems*. It first outlines the basic architecture of Social Registries as information systems, and dives deeper into four key layers of these systems: (a) data and information; (b) software applications; (c) database management; and (d) ICT infrastructure. It then reviews the operation of Social Registries, within the broader context of integrated social protection systems.

A. Basic Architecture of Social Registries as Information Systems

As an Information System, the basic architecture of a Social Registry includes *four elements*: (a) information & data; (b) software applications, including the visual interface and business logic; (c) database management, and (d) ICT infrastructure. While the detailed architecture varies, social registries include each of these elements. In this paper, wherever possible we eschew the term ‘MIS’, and employ terminology such as ‘Information Systems’, ‘Software Applications’ and ‘Database Management Systems’ as defined in IT parlance (See Box 5).

Figure 4 illustrates ‘how’ Social Registries function within the overall architecture, and how they interact with other functional modules of an Integrated Social Protection Information System (see Section 4.B). Since this illustration can appear complex at first glance, we “march through” the various core components, focusing specifically on aspects related to the social registry, with “screen shots” of each relevant section.

Box 5 – What is an ‘MIS’? It depends on whom you ask.

There is plenty of confusion around the term “MIS,” with different definitions of the term in the business community, the International Development community, and the IT community.

- **In the business world**, Management Information System or MIS is an academic discipline or a course of study that focuses on the art of managing information systems effectively, including people, organizations and technology.
- **In the International Development and NGO community**, MIS is a catch-all term that has been used to refer to systems that manage information in specific sectoral contexts. For example, the Human Resource ‘MIS’, Education ‘MIS’, Health ‘MIS’ and so forth. In Social Protection, development practitioners often use the term MIS to refer to systems (or software applications) that manage information for the functioning of registration and eligibility systems – or for the operation of specific programs to deliver benefits and services (e.g., payments transactions, conditionalities monitoring, etc.).
- Meanwhile, **in the IT world**, the definition of MIS is an information system that produces reports that management need for planning and control, by processing information captured by transaction processing systems, stored in databases. MIS is a dated turn of phrase in IT parlance. Contemporary terminology for information systems that produce reports and dashboards include terms such as ‘Business Intelligence’ and ‘Analytics.’

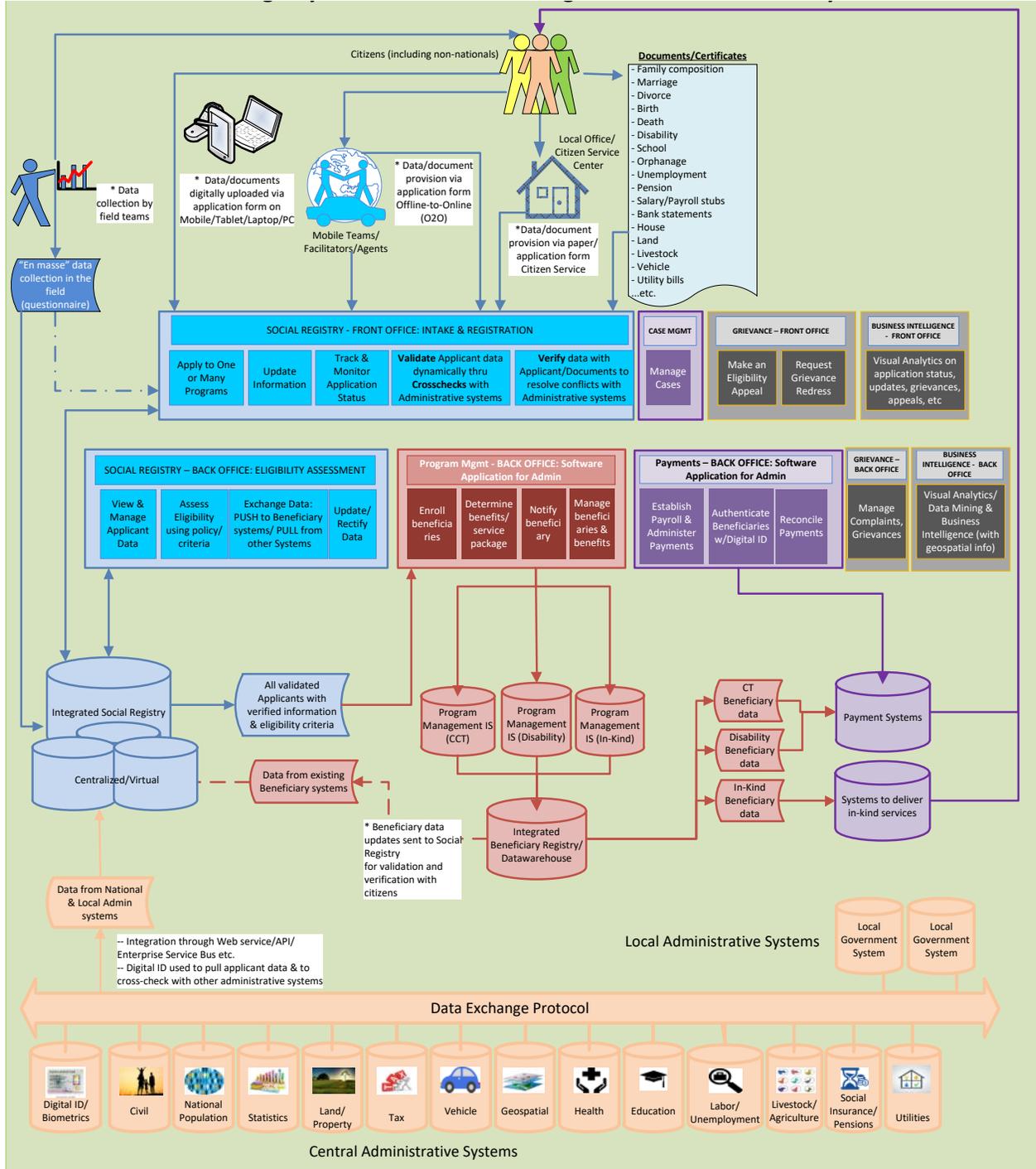
So how do we “translate” the terminology between the IT world and the (social protection) Development Community? In contemporary IT terminology, the term MIS as it was intended to be meant in the development community, refers to ‘Information Systems’, and in particular, ‘Software Applications’ and ‘Database Management Systems’. These terms are defined as below:

- **Software Applications** are standalone programs that solve a specific business need. Such applications process business and technical data in a way that facilitates business operations or management/technical decision making. A database is a large organized collection of data.
- **Database Management Systems** is a software that manages or controls access to a database.²⁰
- **Information Systems** are an interdependent group of elements that function together to accomplish some predefined goal (or to solve an organizational problem) by collecting, organizing, storing, processing, creating and distributing information. To accomplish that goal, an information system makes use of a variety of system elements, namely, Software, Hardware, Databases, People, Procedures and Documentation.

Given the confusion around the term, we prefer to avoid using the term ‘MIS’ in this paper. Wherever possible, we refer to ‘Information Systems’, ‘Software Applications’ and ‘Database Management Systems’ as defined in IT parlance. If more specificity is needed to identify a particular type of information system, we will be more explicit, such as the “**Integrated Social Protection Information System**” (rather than the commonly used – but confusing – term “MIS”).

²⁰ First developed in the 1970s, a relational database management system (RDMS) organizes that data neatly into structures called tables. In the 21st century, “noSQL” database management systems that manage data modeled in means other than tabular relations have evolved, and these are particularly useful for real-time web applications and big data.

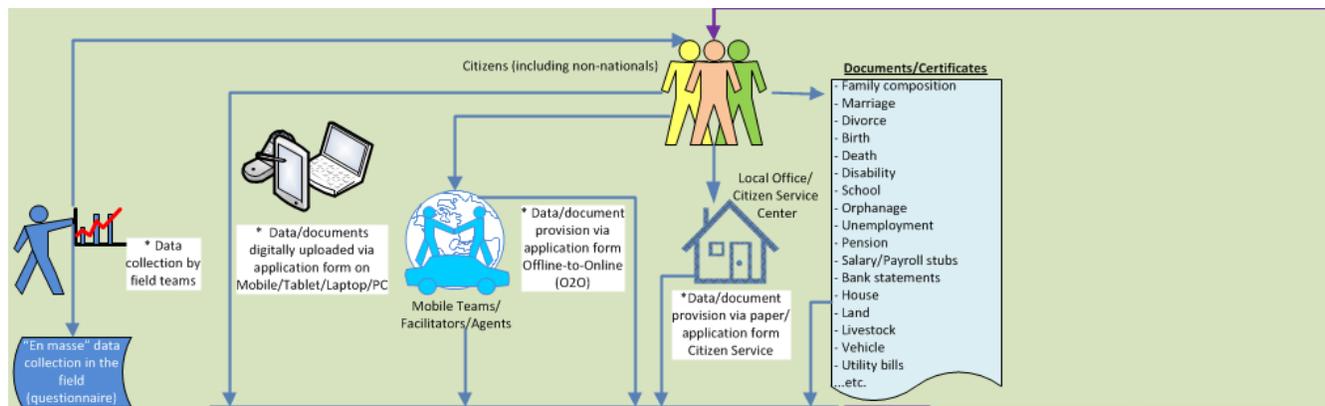
Figure 4 –How does a Social Registry function within an Integrated Social Protection Information System?



Source: Authors.

Data comprise the first key layer of the architecture. Countries adopt a variety of methods for collecting or curating data²¹ needed to carry out registration and eligibility determination functions in Social Registries (see Figure 5). Some rely on information provided by citizens directly (self-reported information), and some draw on information from other administrative information systems via interoperability mechanisms (discussed in more detail below). Many use a mix of these methods (see Figure 5).

Figure 5 – Social Registry Architecture: Data & Information (Screenshot from Figure 4)



Source: Authors

Data Intake

Countries use a variety of data collection methods to allow citizens to register for social assistance. These are described below. Irrespective of the approach, it is critical to design intake and registration methods using **human-centered design principles** so that citizens can navigate the process and technology easily, answer the required questions, upload any required documentation, and so forth, to reduce the administrative burden of wasted time, private costs and fruitless visits, both to citizens as well as social workers and other front-line service delivery staff.

- **Data intake through field teams** whereby data are collected onsite in the communities from all or most families or households within selected areas (or entire regions or most of the country) via an interview questionnaire (and sometimes via home visit verifications of housing conditions and basic services).²² These interview questionnaires can be paper-based, or supported by technology such as tablets or other mobile devices.
- **Data and documents provided at a local office through social workers or citizen service representatives.** This is a common approach in many countries. Local offices can include citizen service centers, social centers, municipal offices, kiosks, etc. They can be managed by central agencies, local governments, or outsourced partners.

²¹ Data can be structured, unstructured or semi-structured. Structured data are information with a high degree of organization, such that it can be stored in a relational database and is readily searchable using algorithms or operations. For example data in spreadsheets. Unstructured data are data that does not have a pre-defined data model and is not organized in a pre-defined. Typically text heavy, but may include dates, numbers etc. Includes data in word documents, web pages etc. Semi-structured data are a form of unstructured data that do not conform with the formal structure of data models but contains tags, metadata or markers to separate semantic elements and to enforce hierarchies of records and fields within the data. For example XML data and JSON (Javascript Object Notation).

²² Castaneda and Lindert (2005)

- **Data and documents provided through offline-to-online approach**, to mobile teams of facilitators, social workers or agents that receive applications in communities. Mode of access is via paper forms, tablets, laptops or personal computers. Social workers interview the applicants and collect responses, either on paper or they input the information through a digital application form using offline-to-online (O2O)²³ approaches when connectivity is weak.
- **Data and documents provided by citizens through a self-service approach**, using a digital application form to input data, with supporting documents digitally uploaded. Mode of access is via mobile devices, tablets, laptops, personal computers, or self-service kiosks located in public spaces. In countries that permit self-service intake and registration, citizens can apply online via ministry websites or through a digital service window that offers a range of government to citizen (G2C) services.

Some countries use human-centered design principles to lessen the administrative burden to citizens of data intake and registration. Simple online “check my (potential) eligibility” simulators allow the individual to input the minimum information to see if they may be potentially eligible for one or more programs before going in person to a local office for the “real” application (to save time for both the individuals and the bureaucracy), or before proceeding to create an account and filling out the entire application with all information required. Again, software for these “potential eligibility” simulators is critical – and the potential applicants should be able to get answers about potential eligibility for one or more programs within a matter of minutes. Various sites for departments of health and human services in specific states (or counties) in the US provide for such eligibility simulators for multiple programs. Another technique to simplify data intake at the point of registration requires citizens to merely present their National ID and sign a consent form. This allows institutions to review socio-economic data on registrants sourced from other government institutions through a sophisticated data exchange mechanism at the back-end. As an example, Bütünleşik in Turkey is described in further detail below and in Box 16.

Data Exchange

Information also comes from other administrative systems. In order to source the most current data from other administrative systems, data exchange protocols may be used to verify, validate or “cross-check” information provided by registrants, or to directly source certain types of information from other systems.²⁴ This also helps social registry systems to become dynamic and adaptive and to reduce the amount of information that the individuals and families have to provide, thereby reducing the time needed carry out intake and registration. As a precursor to building the Integrated Social Assistance System (ISAS) or “Bütünleşik” system, Turkey in 2005 decreed that the administrative burden for collecting 17 different documents to apply for assistance would shift from the citizen to the government, with the objective of social inclusion and streamlining the delivery of social assistance. Although the decree eased the application process for citizens, it still took public servants almost 15 days to gather all the relevant documents. Subsequently, between 2010 and 2015, Turkey’s ISAS Bütünleşik system (which means all-inclusive or integrated), was built to enable the collection of supporting documentation online by exchanging data from several institutions to aid and streamline this very process (See the section on Database & Interoperability for more details).

A whole-of-government approach for sharing data across agencies allows for dynamic inclusion, data quality, efficiency and integrity. Such an approach requires a robust data exchange protocol that can facilitate cross-

²³Offline to Online (O2O) services to citizens are a way of combining virtual and physical spaces, through h mobile platforms help bridge access to services for the poor, vulnerable and marginalized, particularly in countries grappling with poor connectivity that hinders digital delivery of services to citizens. Using an O2O approach, officials do not wait passively at the office for the digital access and applications of citizens needing administrative services, but actively visit the blind spots armed with sophisticated digital devices and provide services to citizens in need. See also Karippacheril et al., (July 2016).

agency sharing of the most current information updates captured from citizens through frontline agencies such as health facilities, schools, citizen service centers for registering property, land, vehicles, businesses etc. Real-time integration between the social registry and other administrative systems can help detect data with the most current time-stamp, because some types of data are dynamic and transactional. Dynamic data have a time dimension, or a numerical value, and refers to one or more reference data objects.²⁵ They change as a result of an event (or a transaction), and therefore the individual or the families' needs and conditions change. For example, life events such as birth, marriage and death, or health conditions, or employment status. However, it may not always be feasible to develop real-time connections between the social registry and other administrative systems due to issues of performance and latency. Some data are static or fixed and rarely change after they are recorded. For example name, gender, date of birth, etc. Other kinds of data change infrequently, (for instance tax data, which changes once a year) and do not need to be updated using real-time integration between the social registry and other administrative systems. Accordingly, institutions agree on a periodic schedule for data exchange, and data are sourced through a bulk data transfer.

Inter-organizational data exchange protocols are typically based on an Interoperability framework defined at the country or broader regional level (see section on Database & Interoperability for more details). Estonia, for example, designed a data exchange layer for whole-of-government called X-Road.²⁶ The objective is to allow citizens, businesses and government entities to securely exchange data and access information maintained in various agencies' databases over the internet, based on the principle that *"The State shall not request from citizens and businesses any data that are already in its possession"*. For example, applying for a categorical parental benefit is an e-Service and does not require submission any supporting documents. The different certificates and documents required are generated automatically by the e-Service (which is a distributed software) by using different agencies' databases to collect data about the applicant.²⁷ Nonetheless, data exchange protocols do not negate the need for self-reported information from citizens registering for social benefits and services, at least in the form of an application or claim to express need. Even in Estonia, minimum income guarantee benefit requires submission of an application, along with documentation of property and movable assets and demonstration that after paying housing expenses families or individuals would not be able to cover basic subsistence needs.

Data Protection

Given that Social Registries involve significant amounts of personal identifying and socio-economic information, legislation, protocols, and tools are critical to support information security and protection of this information. Such protections are critical to the credibility and trust of the system. Development of a Social Registry should be articulated around the concept of digital governance, including access to information, cybersecurity, data security, data confidentiality, privacy standards, and personal data protection. Ideally, these should adhere to international data sharing and information privacy standards and protocols, such as those established by the OECD Guidelines for Fair Information Practices and Protection of Privacy and Trans-border Flows of Personal Data, and the EU's Data Protection Directive and the Council of Europe's Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data.²⁸ Key principles for personal data protection that are critical for social registries include:²⁹

²⁵ In the context of data management, reference data are a list of permissible values used by master data or transactions data. They are often defined by standards organizations such as ISO. For example, units of measure, country codes, etc. Master data is a single source of common business data that are agreed on and shared across an organization, and are used across multiple systems, applications and processes. For social programs, examples of master data include data on citizens (individuals, families, households), social programs (cash transfers, food) etc.

²⁶ Interoperability Framework of the State Information System (2011), Ministry of Economic Affairs and Communication, Estonia.

²⁷ See Kalja, Reitsakas and Saard (2005)

²⁸ See Barca and Chirchir (May 2016), Coudouel and Rougeaux (October 2016).

²⁹ Adapted from Coudouel and Rougeaux (October 2016); and World Bank ID4D (August 2015).

1. **Consent:** Individuals (or household representatives) shall be informed about the institution responsible, the planned uses and users of the data, and their right to respond and to oppose use of their data. They should also sign or otherwise endorse consent for the collection and use of information in the Social Registry, including for use by multiple programs.
2. **Use and proportionality:** Data shall only be collected for specific ends, only if they are necessary for such ends (collection is proportional to needs).
3. **Data quality:** Data should be accurate, complete, and kept updated to the extent possible, for the ends for which they are collected.
4. **Confidentiality and safety safeguards:** Those responsible for data treatment must take all necessary measures to ensure data is not manipulated, damaged, or illegally accessed by others.
5. **Responsible transmission and data sharing:** Data transmission and sharing has to respect the core principles of confidentiality, proportionality and safety, under the guidance of documented data sharing and transmission agreements (e.g., with user programs).
6. **Right to access, correct, and oppose data:** Those whose personal data are collected have a right to obtain information on their data and treatments applied; and to correct, oppose, supplement, update, lock or suppress incorrect, incomplete, ambiguous or outdated data.
7. **Accountability:** A data controller should be accountable for complying with these principles, with clear accountability for any breaches.

For example, the National Unique Registry (RNU, *Registre National Unique*) in Senegal has applied the principles of data protection to key processes enabled by the registry. The principles are applied to the processes of (1) data collection, (2) analysis and storage, and (3) data transmission and use. For the data collection phase, the recommendations are to inform households about the purpose of social registry, potential users, right to not respond (would prevent inclusion), and duration, obtain households' consent, only collect data that is needed for this phase, and ensure the secure uploading of data.

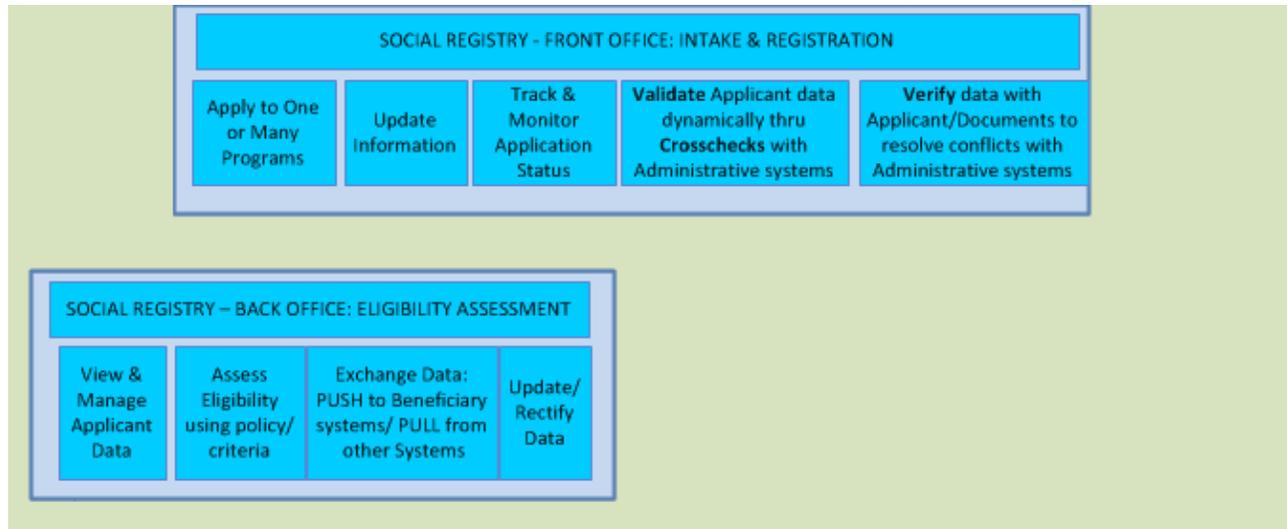
Software Applications

Software applications are the second key layer of the architecture of Social Registries. They support the key functions of intake and registration of applicant data, and assessment of their needs and conditions (see “blue bars” on Figure 4 above, with screen shot below in Figure 6).

Front office software applications for Social Registries provide a visual interface for citizens, and frontline workers who may operate the application on behalf of citizens, for the purpose of: (a) registering to be considered for potential eligibility for one or many programs through digital application forms or questionnaires, (b) updating information and (c) tracking and monitoring application status. Software applications that support more sophisticated Social Registries functionality may also be available to frontline staff and social workers for: (d) validating applicant data dynamically through crosschecks with administrative systems, and (e) verifying data with registrants and supporting documents to resolve conflicts with administrative systems.

Back Office software applications for Social Registries provide a visual interface for program and institutional administrators to transform and manage applicant data for eligibility assessment. It enables them to: (a) view data on individuals & households: unique ID, members, demographics, socio-economic, housing & assets, health, education, employment, utilities, all programs registered, etc., (b) manage data: data cleaning for validity, accuracy, completeness, consistency, uniformity by parsing, deduplication, transformation, statistical methods, etc.; data filtering, data matching & data archiving, audit trails, (c) assess eligibility using policy/criteria, (d) generate eligibility list, (e) exchange data: (i) push eligibility data to beneficiary systems, (ii) extract, transform and load data sourced from other administrative systems, (f) update/rectify data based on cross checks, using protocols.

Figure 6 – Social Registry Architecture: Software Applications (Screenshot from Figure 4)



Source: Authors

With the rapid penetration of mobile devices and mobile coverage, mobile applications are being used for intake and registration, cross-checks and eligibility assessment. In a number of countries, front-office software applications may be available to case workers at their offices (or in tablets/mobile devices) or data entry operators to input that data into the system. Despite the availability of such software applications, case workers may still end up using paper forms for speed and efficiency when they are face-to-face with registrants (applicants) in the office or in the field. They may use the software application to input data in their spare time. Such scenarios more likely than not suggest that those software applications need to be designed with human-centered design principles in mind so as not to impose an undue administrative burden on citizens or case workers.

Database Management and Interoperability

The third layer of the architecture of Social Registries includes database management, within the broader context of data integration, interoperability and coordination with other administrative systems at the central and local level (see Figure 7), that can enable sophisticated business intelligence and analytics.

Information sourced from citizens are housed and managed in database management systems. The architecture for data management varies significantly across countries, and there is no one single model for this. Information systems are developed over time using different database management technologies and approaches, and may be owned by different parts of an organization. As a result, data are fragmented across a number of hardware, software, organizational and geographic boundaries. Several kinds of architectural models are possible for managing data to improve the performance of the system.

- 1) For some countries, the Social Registry operates a self-contained database management system without links to other administrative systems across government agencies or levels of government. It is programmed to answer requests from client computers connected to a database server. Self-contained Social Registries rely largely on self-reported information from citizens, sourced through en-masse census survey sweeps or through intake and registration forms.
- 2) In countries where the social registry operates as part of a 'whole-of-government' architecture for managing information systems across agencies, it may use either a centralized or a virtual/federated model. (a) In a centralized model, data is sourced from other systems, replicated and stored locally. (b)

A federated or virtual model allows data exchange with other systems that store data in incompatible database management systems or storage models, and that may have been developed at different points in time by different entities. A federated or virtual database culls from multiple sources as if it were a single entity. These databases are connected via a computer network and are then accessed as if they are from a single database. The goal is to be able to view and access data in a unified way without needing to copy and duplicate it in several databases or manually combine the results from many queries.

Social Registries that are connected to a ‘whole-of-government’ architecture rely on data integration and interoperability³⁰ frameworks to facilitate the exchange of data from other administrative information systems in order to complement “self-reported” information from citizens (Figure 7). Examples include linking to administrative information systems such as: civil registration database, national population register, land or property cadasters, vehicle registration, tax system, social security contributions system, pensions payments system, labor and unemployment, education, health, etc.

Such interoperability frameworks require a political, legal, organizational, semantic, and technical context. Politically, there must be a real need, endorsed by political decisions and have a legal basis. Participating organizations must have a commonly view and objective. Legally, they must comply with laws governing information such as personal data protection, digital signatures, information security, public information, public procurement etc. Semantically, the framework must be based on different organizations understanding the meaning of information similarly. This entails building of common data dictionaries³¹ (with common definitions of variables, reference units, and time reference periods), metadata, thesaurus, taxonomies, ontologies, service registers etc. Technically, the framework must comply with service oriented IT architecture standards. Interoperability also requires that some sort of unique identifier(s) are included in all information systems such that data on individuals can be properly matched up across systems (e.g., via a national unique identification, see Box 6).

Box 6 – The Importance and Use of Unique Identifiers in Social Registries

Unique identifiers such as a National ID serve as a “key” to open the door to integrated systems across programs, government agencies, and even ‘whole-of-government’. Social registries use unique identifiers to facilitate cross-checks of administrative information systems from other government agencies to validate and verify data on registrants. They also use unique identifiers to facilitate the authentication of those being registered in the Social Registry.

Identification is the process of ensuring that an individual is assigned a unique identifier that establishes “who is this person.” In Social Registries, unique identifiers are needed to: (a) verify and authenticate identity of individuals; (b) link those individuals to families or households (depending on the definition of the assistance unit); (c) ensure non-duplication of registered individuals; and (d) linking of the social registry with other administrative information systems for the purposes of data sharing and exchange or cross-checks. The unique identifier can vary from a national identity number (foundational ID) to a number assigned to the individual within the Social Registry system for that purpose (functional ID) on the basis of identifying documentation. Ideally, the Social Registry would use a National ID that is robust and accurate, with full coverage of the population.

India’s Aadhaar unique identification number is a 12-digit random number issued to the residents of India based on voluntary enrollment. Individuals provide minimal demographic and biometric information during the enrolment process and an Aadhaar number is generated. Uniqueness is achieved through the process of demographic and biometric de-duplication. Aadhaar is used as a basis to roll out several Government welfare schemes and social programs. It one of the

³⁰ Interoperability is defined as the ability for a system to share information with other independent systems using common standards.
³¹ A data dictionary is a repository that contains descriptions of all data objects consumed or produced by the software. An organized listing of all data elements that are pertinent to the system, with precise, rigorous definitions so that both user and system analyst will have a common understanding of inputs, outputs, components of stores, and (even) intermediate calculations.

key pillars of a 'Digital India', wherein every resident of the country is provided with a unique identity. It is by far the largest biometrics based identification system in the world.

Beyond authentication of identity, unique identifiers are needed for interoperability. All connecting information systems need to have the same set of unique identifiers to match and link information. This is greatly facilitated by the use of a robust and accurate National ID.

However, not all countries operate a National ID. Countries without National IDs do connect administrative systems. The US, for example, uses a set of identifiers to match individuals across administrative systems (name, address, gender, birthdate, social security number, etc.).

In other countries the National ID system may be weak, with low coverage of the population, especially among the neediest population, or with many errors and duplications. In those situations, lack of coverage of the National ID can be a barrier to entry into the Social Registry (exclusion). Conversely, inability to verify identity can result in duplications or fraud, when someone pretends to be someone they are not by using a counterfeit ID or an authentic ID belonging to someone else. In countries without a robust and accurate National ID, functional IDs are often created and assigned for the purposes of a specific social program or the Social Registry.

In Brazil, for example, the Cadastro Único (*Cadúnico*) assigns a Unique Social Number (NIS) to individuals on the basis of a variety of identifying documents and IDs (e.g., the PIS and CPF). The multitude of IDs in Brazil is due to the fact that the PIS (Programa de Integração Social) number is provided only to formal sector workers, and the CPF (Cadastro de Pessoa Física) is obtained on request. Moreover, other IDs, such as the voter ID and Identity ID, were managed for many years at the local level with no integration at the national level. Since the poor and vulnerable are commonly outside the formal sector, many lack the PIS and CPF. As a consequence, when people register, the *Cadúnico* assigns the NIS as the identification number for all individuals in the system. If an applicant has a PIS, this number was used as the NIS; for those without the PIS, a new unique NIS is generated. The NIS becomes the official number for social assistance, and if the individual registered in the *Cadúnico* obtains a formal sector job, the NIS becomes the PIS.

Sources: World Bank ID4D (August 2015); plus authors.

The architecture of data integration and data management varies (See Table 1). For years, integration between different systems were often point to point, picking up specific data from specific agencies. They cost considerable time and money, let alone resulting in a spaghetti-like mess of connections between institutions. SOA, or "service-oriented architecture," a development in the last 10 years, makes coupling between institutions loose, i.e. connections are not hardwired to the databases of other agencies. With the advent of SOA, a number of countries turned their connections or points into private APIs (application programming interfaces). Communication is directed via a VPN (Virtual Private Network) to facilitate secure data exchange between government institutions. Nevertheless, this did not solve the problem of transforming the spaghetti into a unified data integration approach. To address this issue, some countries build the Social Registry as a data warehouse, which ingests data from multiple agencies. The integration model for such an approach depends on the volume of data and frequency of data updates, and can be summarized as follows³²:

1. **For chatty or transactional data – An enterprise service bus (ESB) is used for real-time and asynchronous communication.** The enterprise service bus approach allows data to be routed and orchestrated between multiple agencies, based on a queuing system for data exchange requests. An example is a credit card payment over the internet, or an individual registering for benefits. In terms of data security, this model uses a firewall or a VPN to protect the data.
2. **For bulk data – An extract transform load (ETL) approach is used to extract bulk data from data marts of different agencies, to transform and load them up into a centralized data warehouse.** This doesn't

³² WB Information and Technology Solutions, Integration Decision Framework, Position Paper, January 2016

have a ‘drip-drip-drip’ approach, where changes in data are constantly updated. In terms of data security, this model uses a WLAN, VPN or other trusted connections. It tends to be a more involved and centralized approach, with the added burden of having to protect the security and confidentiality of the data that has been collected. Some countries will do an ETL for bulk data once, and then a ‘drip-drip-drip’ method for data that changes frequently. A ‘flush and refill’ needs to be done periodically to ensure data is kept up-to-date. Turkey and Chile use this approach.

3. **For bulk + transactional – A Data Virtualization (DV) approach, where data is pulled together virtually and in real-time from different agencies and databases, without consolidating in a centralized data warehouse managed by one agency.** This also allows sensitive data from agencies to be masked. In terms of data security, they could use firewall, VPN, WLAN, SSL handshake or whitelisting. This is a more agile approach when a more centralized approach is not feasible for various reasons, such as time, total cost of ownership, challenges with collecting and centralizing bulk data from other government agencies etc. Countries such as Jordan and Egypt are experimenting with this approach.
4. **A hybrid approach is to complement a centralized data warehouse with data virtualization, to include additional data, and extend the existing investment in a centralized data warehouse.** Centralized data warehouses are useful for physically consolidating and transforming large volumes of data from various sources. When they are outpaced by the frequency of data updates, it proves challenging to keep large and centralized data warehouses current. In such instances, a hybrid approach may be useful.

Table 1: Social Registry Architectural Models for Data Management and Data Integration

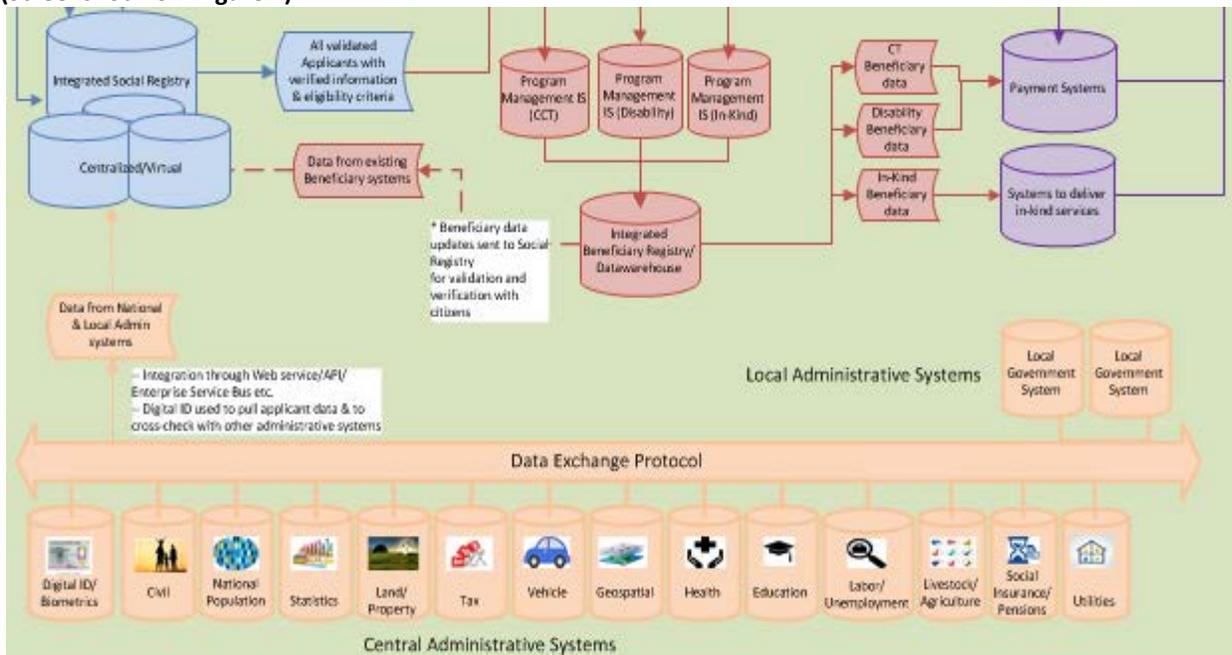
| Model | Data management | Volume of Data Update | Frequency of Data Update | Integration approach | Data Security approach |
|--------------------------------|---------------------|------------------------------|--------------------------|-------------------------|---|
| Self-Contained Social Registry | Database | Bulk Data | Infrequent | None | Firewall |
| Centralized Social Registry | Data warehouse | Chatty or Transactional Data | Frequent | ESB | Firewall or VPN |
| | Data warehouse | Bulk Data | Infrequent | ETL | WLAN, VPN, Whitelisting, SSL Handshake etc. |
| | Data warehouse | Bulk + Transactional Data | Both | ETL with Flush & Refill | VPN, Whitelisting, SSL Handshake etc. |
| Virtual Social Registry | Data Virtualization | Bulk + Transactional Data | Both | DV | Firewall, VPN, WLAN, SSL handshake or whitelisting etc. |

Protocols must be in place to address issues arising from data conflicts between the Social Registry and other information systems. In some countries, the software application will display red flags or warning messages signaling the need for verification, updating or rectification, which are then cross-checked with the citizen orally when they come into contact with the social worker, mobile teams, the service center or other frontline staff. Pakistan, for example, has started to pilot this approach. In some other countries such as Chile, there are protocols for data updates and rectification. The data point with the most recent time-stamp is given precedence and is then cross-checked with the citizen to verify orally at the point of intake and registration, or when they come into contact with the frontline staff. In Turkey, the system alerts administrators when there are data conflicts, using a task-list with action items.

The adoption of data sharing protocols, legal agreements and a memorandum of understanding (MoU) between social programs and the custodian of Integrated Social Registries data is vital. The Philippines has

recently developed standard data sharing protocols governing use of information from the Listahanan Social Registry. A core principle governing these agreements is that Social Registries should share only specific information needed for the agreed purposes with legitimate user programs in order to protect information security and confidentiality (i.e., just the agreed minimum set of variables needed for user programs to take their decisions). Data sharing agreements should be clear on the agreed and specific use of the information to be shared, exact types of information to be shared (specific variables, time periods, etc.), specification of confidentiality and security principles and safeguards, specification on specific users and their access levels, and so forth.

Figure 7 – Social Registry Architecture: Database Management within the broader Digital Governance context (Screenshot from Figure 4)



Source: Authors

ICT Infrastructure

Finally, the fourth key layer of Social Registry Information Systems is ICT infrastructure. These elements are not illustrated in Figure 4 as they are highly context specific, but they are important to keep in mind when designing a Social Registry. ICT infrastructure refers to composite hardware, software, network resources and services required for the existence, operation and management of an organization’s IT environment. It can be as simple as setting up IT equipment (servers, network, storage, power supply and cooling) in a room onsite, or as complex as commissioning a data center in a warehouse-style building. Typically a data center to support sophisticated operations include the following components of ICT infrastructure:

- **Facilities** – including electrical power utility grids, UPS (uninterrupted power supply), back-up generators, power distribution units, automatic transfer switches, and cooling equipment.
- **Server equipment** – including servers mounted on racks and cabinets (physical and virtualized).
- **Networking equipment** – including routers, ports, switches, load balancers and link technologies (copper/fiber cabling).

- **Storage equipment** – arrays mounted on racks and cabinets
- **Security** – including physical monitoring and controls on onsite access such as keycards, locks, biometric verification such as retina scanners, motion sensors, CCTV, and virtual controls to secure access to networks, servers, application, data protection, cyber-threats, hacking, data modification, intrusion prevention and targeted threat detection.

A number of governments³³ are moving towards a shared data center approach to manage the time and cost of procurement, investment and operations and to achieve economies of scale for government, as a whole. Fragmentation of programs have resulted in duplicate investments in software applications, databases and ICT infrastructure across and within government agencies. Some governments opt for a cloud-based (infrastructure-as-a-service)³⁴ approach, to minimize procurement, investment and operations costs, and to take advantage of potentially unlimited computing power, taking into account that this approach also entails a loss of control as well as additional security concerns.

B. Social Registries in the Context of Integrated Social Protection Information Systems

Many countries are moving towards Integrated Social Protection Information Systems. Social Registries are just one component of these systems. Other elements include beneficiary registries, benefits administration systems, grievance redress systems, and links with other administrative systems.

Social Registries are Just One Component of Social Protection Information Systems

Social Registries don't operate in isolation. At the most basic level, a Social Registry feeds eligibility information to social program(s) for enrollment decisions, which lead to the creation of a beneficiary registry(ies) and benefits administration. In functional terms, this means linking the blue panel in the Delivery Chain in Figure 1 above (supported by the social registry) with the pink panel (which generates the beneficiary registry) and then the purple panel (which supports benefits administration).

Moreover, they're only one part of the puzzle: there are many other functions that need to be developed in managing social programs. While Social Registries can support the “gateway functions” of intake, registration, and eligibility determination, they do not fill other core functions needed to manage social programs. These include beneficiary and benefits administration systems, case management systems, grievance redress systems, and so forth. Furthermore, as discussed in Chapter 2, not all countries or programs operate Social Registries; some simply record information only on beneficiaries, on the basis of enrollment decisions that are take outside the system, for example in situations in which communities or local councils take such decisions directly.

Countries are increasingly operating or developing “Integrated Social Protection Information Systems” to link these functions. Such information systems are comprised of components that automate various functions of the delivery chain in a complementary manner, including the following³⁵:

- **Social Registries** support the processes of outreach, intake and registration, and assessment of needs and conditions.

³³ Korea built a Government Integrated Data Center in 2005 for whole of government with more than 20,000 pieces of hardware equipment and a 30% reduction in data center costs.

³⁴ Parts of the US Government use cloud-based Amazon web services, as infrastructure as a service.

³⁵ While it is beyond the scope of this paper to get into a detailed examination of delivery systems for managing social programs (e.g., beneficiary registries, benefits administration, payments administration, conditionalities monitoring, and so forth), many of the concepts and principles would apply to those systems as well.

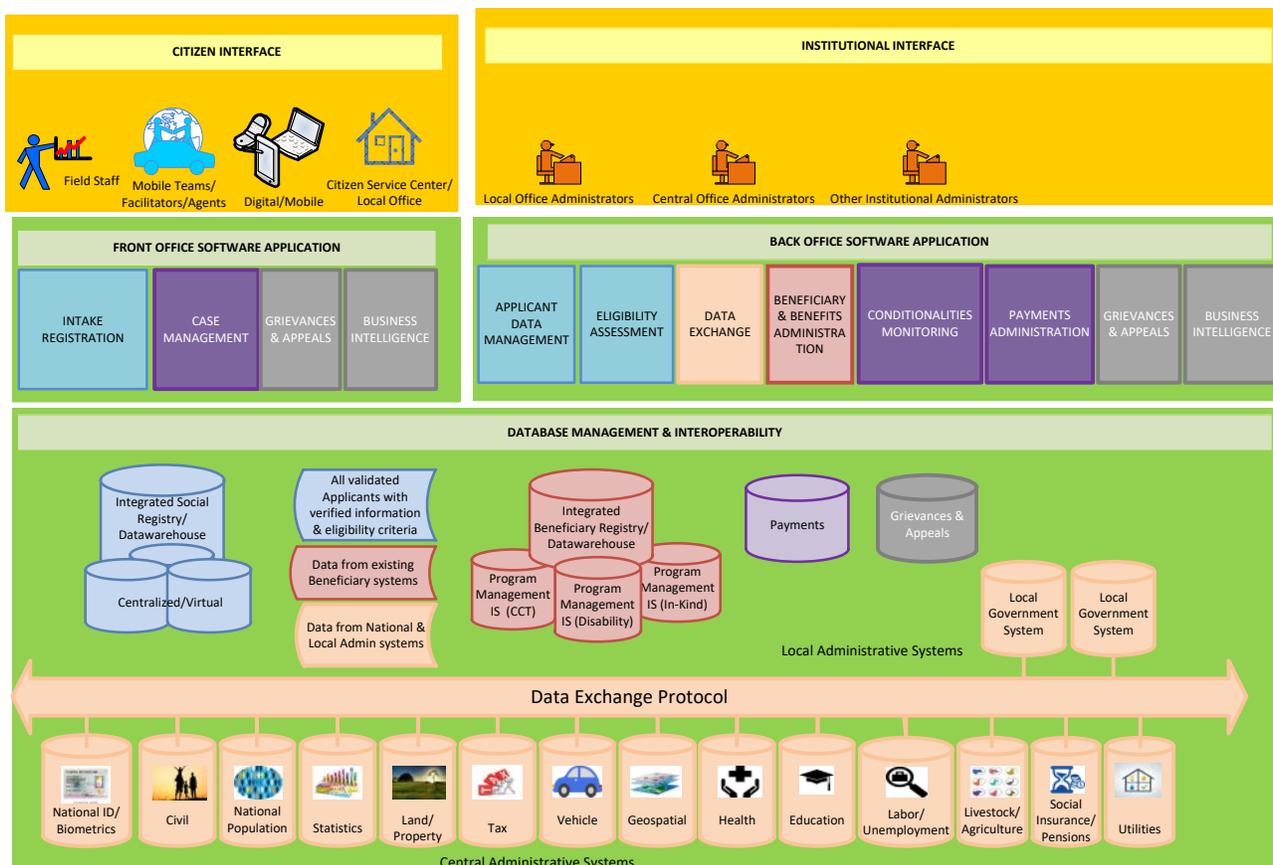
- **Beneficiary registries and benefits administration systems** support decision, enrollment and notification phases along the delivery chain for a social program, as well as the management of information on beneficiaries.
- **Payment systems** support payments administration and payments service provision. Linking payment flows with other program processes is critical to ensure the delivery of appropriate benefits to properly targeted individuals in a timely manner while minimizing costs.
- **Case management systems** support the management of individuals/families/households participating in one or many programs, including needs assessment, planning and implementing services, advocacy, making appropriate linkages with service providers and complementary programs, and monitoring the delivery and use of services, including conditionalities monitoring.
- **Grievance redress mechanisms** support filing of eligibility appeals, complaint handling, feedback and engagement of applicants, beneficiaries and potential beneficiaries of social programs.
- **Unique national ID or digital identification systems** support the process of assigning a unique identifier to an individual that establishes “who is this person” (see Box 6). For integrated SP information systems, unique identifiers are needed to: (a) verify and authenticate identity of individuals; (b) link those individuals to families or households (depending on the definition of the assistance unit); (c) ensure non-duplication of registered individuals; and (d) linking with other administrative information systems for the purposes of data sharing and exchange or cross-checks. India’s Aadhar unique identification number is a 12-digit random number issued to the residents of India based on voluntary enrollment. Aadhar is used as a basis to roll out several Government welfare schemes and social programs, and is by far the largest biometrics based identification system in the world.
- **Business intelligence and analytics** allows the transformation, generation, aggregation, analysis, and visualization of data into meaningful and useful information for social policy analysis and strategic decision support for social programs. It includes techniques such as data visualization, data mining, reporting, time series analysis (including predictive techniques), online analytical processing (OLAP), statistical analysis, standardized reporting, ad-hoc analysis, query & reporting, unstructured analytics, text analytics etc. Countries such as Mexico, Turkey and Chile are developing BI and data science approaches layering data from geographical information systems, beneficiary registries, social registries, and other data stores, as part of an integrated SP information systems strategy.
- **Interoperability frameworks** for data exchange, including APIs, Web Services, Enterprise Service Bus etc. to connect to a whole-of-government architecture are also key components of an integrated SP information system. Within the broader country context of Digital Governance, integrated SP information systems interact with numerous other administrative systems, such as the National ID, civil registry, tax authority, etc., exchanging and cross-checking data across central and subnational levels of government. Moreover, the architecture of integrated social protection information systems includes feedback loops between the various information systems components for managing social programs (e.g., with data on enrollment decisions from the Beneficiary Registry feeding back to the Social Registry).

Visually, the components of these Integrated Information Systems are depicted in Figure 8 and include:

1. **The functional modules of the Social Registry** component include Intake and Registration, Applicant Data Management and Eligibility Assessment: Boxes shaded *in blue* to indicate these are part of the assessment phase of the delivery chain;
2. **Beneficiary & Benefits Administration**, to support decision and notification phases along the delivery chain: Boxes shaded *in pink*; when these Beneficiary Registries are linked or “integrated,” they can support coordination across programs;

3. **Payments Administration, Case Management & Conditionalities Monitoring**, to support implementation phases along the delivery chain: Boxes shaded in **purple**;
4. **Grievances and Appeals** (filing an eligibility appeal; requesting grievance redress), and **Business Intelligence** (with geospatial information) and running visual analytics on application status, updates, grievances, eligibility appeals: Boxes shaded in **grey**;
5. **Interoperability protocols** (data exchange, including APIs, Web Services, Enterprise Service Bus etc.): Boxes shaded in **peach**.

Figure 8 –Integrated Social Protection Information Systems



Source: Authors.

Two Parts of the Puzzle: Integrated Social Registries & Integrated Beneficiary Registries

Numerous countries operate Integrated Social Registries, as discussed in Chapter 3 above. These Integrated Social Registries typically use common intake and registration processes, and then feed information on potential eligibility to multiple social programs based on an assessment of registrants’ needs and conditions. The programs would then make enrollment decisions based on program-specific eligibility decisions and budgetary space. Integrated Social Registries. Importantly, since Integrated Social Registries collect information on all applicants, they can be a signal of the potential “demand” for social programs.³⁶ Examples of Integrated Social Registries include Brazil’s *Cadastro Unico*, Pakistan’s National Socio-Economic Registry, and the Philippines’ *Listahanan*,

³⁶ Silva Villabos, et. al., (2015)

which all serve multiple programs, as discussed in Chapter 5 below. As discussed above, some Integrated Social Registries also link to other administrative systems, such as the ID system (for authentication) and systems for taxes, pension contributions, property, and so forth.

Some countries operate Integrated Beneficiary Registries for coordination and efficiency of benefits administration. Integrated Beneficiary Registries allow for monitoring and coordination of “who receives what” benefits,” and for identifying intended or unintended duplications across programs. Since Integrated Beneficiary Registries link information on beneficiaries of social programs, they can be a signal of the potential “supply” of social programs.³⁷ An Integrated Beneficiary Registry operates as a data warehouse that collects information from different social programs and their benefits administration systems, such as the number and characteristics of beneficiaries, value, expenditure on social programs, performance of programs, such as the frequency of payments/transfers, speed or cycle-time of key processes, number of complaints received and resolved.³⁸ It allows for cross-checks using interoperability mechanisms between separate stand-alone benefits administration systems and other administrative information systems such as Income tax, Civil Registration, as well as the Social Registry. It allows for monitoring and reporting on that information, and disaggregation by geographic location. Such analytics on the various programs would not only be useful to the government, but also to citizens for better transparency on the performance and management of social assistance programs. One example is Kenya’s “Single Registry” system. The country disposes of a number of SSN protection programs, including (1) the Cash Transfer Program for Orphans and Vulnerable Children, (2) the Older Persons Cash Transfer Program, (3) the Persons with Severe Disability Cash Transfer, (4) the Hunger Safety Net Program, and (5) the World Food Programme Cash for Assets Program. Kenya has consolidated these programs by creating an integrated beneficiary registry for social protection with a view to providing accurate analytical reports on the social protection sector. Prior to developing that system, three cash transfer programs managed under the same Ministry had developed parallel software applications, databases and ICT infrastructure for management of information on beneficiaries, benefits administration and payments. Frontline social workers responsible for these programs relied on separate software applications. A gradual process of consolidation of those programs entailed the harmonization of the front-office software applications to have a similar look and feel, although their database components are all still separate. Eventually, those databases were consolidated by means of a data warehouse that serves as an Integrated Beneficiary Registry, which is now called the “Single Registry.” The so-called ‘single registry’ has allowed efficient program monitoring, reduced double registration, increased transparency and accountability, promoted the efficient transfer of data, and enhanced the quality of operations.

Interestingly, many countries operate only one or the other – *either* an Integrated Social Registry *or* an Integrated Beneficiary Registry.

- **Some countries with Integrated Social Registries lack Integrated Beneficiary Registries.** Many countries have focused their efforts on developing Social Registries as tools for managing the “gateway” for consideration of eligibility of social programs. However, they do not link information on actual beneficiaries across social programs, particularly when those programs are managed by multiple agencies. In other words, they have not developed Integrated Beneficiary Registry systems – and thus lack the ability to monitor and coordinate “who receives what benefits,” and to identify intended or unintended duplications

³⁷ Ibid.

³⁸In some instances, donors or other agencies operate digital platforms for integrated beneficiary and benefits management. For example, the World Food Programme’s (WFP) SCOPE, is a proprietary digital platform for beneficiary and transfer management, which imports data on beneficiaries of a program, uses biometric capabilities to capture and store identity data to authenticate them at the point of registration, de-duplicates data on beneficiaries, manages entitlements to beneficiaries, administers the delivery of benefits through commercial payment service providers (cash or mobile) with multi-factor authentication (Scope Card, Barcoded Household ID Card, Pin number, Biometrics) and provides analytics on program operations. Discussions with WFP Staff in Washington DC, March 2017. Presentation on SCOPE, Beirut, August 2016.

across programs. One example is Brazil. While the *Cadastro Unico* Integrated Social Registry serves as a common gateway for some 30 social programs aimed at serving the poor and low income groups, Brazil does not operate an Integrated Beneficiary Registry that would allow it to coordinate and monitor benefits across these programs, particularly across the programs that are outside the Ministry of Social and Agrarian Development (MDSA). It thus has no way of tracking “who gets what” across programs managed by different agencies, even if they all use the common gateway of the *Cadastro Unico*.

- **Other countries have developed Integrated Beneficiary Registries, but do not operate Social Registries.** Other countries have focused their efforts on the creation and integration of beneficiary registries to support benefits administration and coordination, but without developing Social Registries. One example is Kenya, which has developed the “Single Registry” to consolidate beneficiary registries, as discussed above. As discussed in Chapter 2, some countries (or programs) do not record information on all potential beneficiaries (registrants or applicants) of a social program. Rather, programs gather information only on beneficiaries, on the basis of enrollment decisions that are taken “outside the system.” For example, with community-based targeting mechanisms, communities or local councils take enrollment decisions without recording information on all *potential* beneficiaries. Instead, once these enrollment decisions, information on beneficiaries is recorded in beneficiary registries and used in benefits administration systems. Efforts have then focused on consolidating these registries into Integrated Beneficiary Registries for greater coordination across programs. However, without Social Registries – which support intake and registration and determination of potential eligibility for all applicants, these systems lack social accountability mechanisms such as grievance redress systems to handle appeals for those individuals or households who are excluded from social programs (potentially eligible non-beneficiaries). Other examples of countries with integrated beneficiary registries but not Social Registries include, *inter alia*: Vietnam’s POSASOFT (integrated beneficiary registry), Rwanda’s iSP-MIS (integrated social protection management information system), and various others in Africa that are currently under development.

Putting the Puzzle Together: Integrated Social Protection Information Systems

Some countries have combined these approaches and taken them further, creating Integrated Social Protection Information Systems. A notable example is Chile’s Integrated Social Information System (SIIS),³⁹ which combines numerous elements: (a) an Integrated Social Registry (*Registro Social de Hogares*, RSH), which serves as a gateway for determining potential eligibility for some 80 programs (benefits and services) from numerous agencies; (b) an Integrated Beneficiary Registry (*Registro Integrado de Beneficiarios*, RIB), which links information on beneficiaries across these programs; (c) an integrated inventory of social programs (BIPS), which is more of a planning tool to monitor current and planned social benefits, services and infrastructure across the country; and (d) a territorial information system to geo-reference individuals and households in the RSH and RIB, as well as social programs in the BIPS, and which can link to other territorial information to support disaster response and management. The overall system (SIIS) and its components all link numerous administrative systems with interoperability capabilities for data exchange, which facilitates efficiency, authentication, information quality and accuracy.

The combination of Integrated Social Registries and Integrated Beneficiary Registries is a powerful social policy tool.⁴⁰ Integrated Social Registries can serve as a measure of the “demand” for social programs, particularly when they allow for dynamic intake and registration, as in the case of Chile’s RSH. Integrated Beneficiary Registries can serve as a measure of the “supply” of social programs, as is the case for Chile’s RIB. By putting these together, the SIIS allows for sophisticated policy analysis including: (a) profiling of the specific needs and conditions of various groups of the population (demand-side analysis via the RSH); (b) coordination of the “supply” across programs, including detecting of intended or unintended overlaps; and (c) analysis of potential

³⁹ Silva Villalobos (October 2016).

⁴⁰ Silva Villalobos et. al. (2015).

“gaps” in coverage of key bundles of benefits and services that could be tailored to the typical needs of these profiled groups (combining the demand- and supply-side analytics of the RSH and RIB). This gap analysis could allow for simulations of fiscal resources needed to extend key benefits and services to underserved groups, with clear identification of the potential additional beneficiaries that could be added.

Building Integrated Social Protection Information Systems

While it is beyond the scope of this paper to describe in detail the ‘how to’ of all of the components of an Integrated Social Protection Information System, it is important to note that the approach should incorporate a business-process orientation and a systems architecture approach.

This systemic process-oriented approach is not always adopted. In several countries, information systems for managing and administering social programs tend to be limited in scope or non-existent. In these countries, interventions are limited to developing ‘mere databases’ and managing data as lists (socio-economic classification registries, beneficiary registries, payments registries, etc.), rather than building full-fledged information systems that will support the daily operations and administration of social programs. The software applications are limited to visual interfaces for applying to programs and providing basic reporting. Software applications that automate key functions and processes such as cross-checks, validation and verification, administration of benefits, administration of payments, case management or even grievance management are semi-manual or manual. These software applications are not built as part of an information system or an overall Integrated Social Protection Information System. With limited capacity, building information systems from the traditional perspective of a pulling together databases in the form of a spreadsheet or even a small-scale database management system may well be a worthy approach in the short term.⁴¹ However, over the medium-to-long term, it is critical that countries develop a business process orientation when building information systems to ensure that the end-to-end processes of managing social programs are automated, as a by-product of which timely, accurate, complete and high quality transactions data are generated.

In order to build full-fledged information systems, a business-process orientation is needed. Top on the policy agenda would be to develop comprehensive process maps of the delivery chain, with clarity on roles and accountabilities of various institutions, who does what and when (See Annex 2).⁴² The next important step would be to conceptualize what the overall integrated digital social protection systems architecture would look like for the country, and how to sequence the implementation of those components, in tandem with legislative reforms, public administration reforms, and technology application within the local context. However, this is not to say that the building of information systems should be incremental and that countries should be entirely devoid of risk-taking. The policy agenda when building full-fledged information systems for social programs should not be limited to that of cautious incrementalism, but that of learning from the experiences of other countries and leapfrogging, utilizing clever technology options where appropriate, especially where countries have the capacity and the ability to quickly develop ‘good-enough’ business processes and systems designs. Governments should develop Integrated Social Protection Information Systems as part of their overall agenda to build trust with the citizens through their day-to-day interactions and delivery of services to them.

⁴¹ Some “so-called” social registries are developed as “mere databases,” but these do not fulfill the functions of Social Registries as inclusion and information systems.

⁴² Greece developed delivery chain maps for hundreds of programs in an effort to develop a comprehensive plan and roadmap for building integrated digital social protection systems.

Chapter 5: Cross-Country Typologies and Trajectories of Social Registries

This Chapter shifts the discussion from framework and concepts to an overview of Social Registries in practice. The Chapter primarily builds on diverse experiences with Social Registries in 20 countries: **Azerbaijan, Brazil, Chile, China, Colombia, the Dominican Republic, Djibouti, Georgia, Indonesia, Macedonia, Mali, Mauritius, Mexico, Montenegro, Pakistan, the Philippines, Senegal, Sierra Leone, and Turkey.** Annex 1 provides additional details for each of these Social Registries. In addition, other social registries are included to illustrate specific points, such as Kenya, Rwanda, Nigeria, Egypt, Vietnam, the US, Estonia, Belgium, Canada, Australia, and so forth. As the Chapter demonstrates, there is much diversity around various characteristics of Social Registries. One key distinguishing feature that is convenient for classifying these systems up front is whether or not the primary method for intake and registration is on demand (at the initiative of applicants) or via *en masse* registration waves (supply-driven “census sweeps” to register all or most citizens in specified areas at the initiative of administrators). With *en masse* registration systems, we further classify as to whether they operate more-or-less on a national basis, whereas others are restricted to limited areas. Many systems use a mix of on demand and *en masse* methods, but the classification in Box 7 is according to the primary method by which the majority of applicants or registrants enter the system. As shown in Box 7, the examples in our sample of 20 countries are split fairly evenly between those using on-demand methods for intake and registration and those primarily using *en masse* census-sweep registration waves.

| Box 7 – Classification of Social Registry Systems by Primary Method of Intake and Registration Sample of Social Registries in 20 countries (Details in Annex 1) | |
|---|---|
| On-Demand Registration of Applicants | <i>En Masse</i> Registration Waves (Census Sweeps) |
| <ul style="list-style-type: none"> • Azerbaijan VENTAS • Brazil Cadastro Unico • Chile RSH in SIIS • China’s Dibao Registry • Colombia SISBEN on demand window* • Georgia TSA Registry • Macedonia CBMIS • Mauritius SRM • Mexico SIFODE (via user programs) • Montenegro SWIS • Turkey ISAS | <p><i>Operating on a Nationwide Basis:</i></p> <ul style="list-style-type: none"> • Colombia SISBEN* • Dominican Republic SIUBEN • Pakistan NSER • Philippines LISTAHANAN <p><i>Operating within Specified or Limited Geographic Areas:</i></p> <ul style="list-style-type: none"> • Djibouti RSU • Indonesia UDB (does not yet operate in all districts) • Mali RSU • Senegal RNU • Sierra Leone SPRINT • Yemen SWF Registry |
| <p>*Colombia’s SISBEN carries out <i>en masse</i> registration waves every 5 years, but does have an “open window” for on-demand applications via municipal offices, with about a quarter of those registered entering through on demand since the last round of <i>en masse</i> registration in 2011.</p> | |

With this sample of Social Registries, this Chapter illustrates the *diverse typologies and trajectories* of country experiences with Social Registries in terms of three key features: (a) institutional roles and responsibilities (central and local); (b) characteristics of their role as inclusion systems: coverage, integration for use by multiple programs, and dynamic inclusion for access to intake, registration and updating by anyone at any time; and (c) characteristics of their architecture as information systems: degree of interoperability with other systems and structure of database management.

It is important to highlight that these systems evolve over time and the starting points matter in terms of context, capacity, and objectives. This also means that these systems will continue to evolve beyond the time-frame of this paper. As such, when “current characteristics” are presented to describe diverse typologies of Social Registries “today,” we loosely refer to the period from circa 2015-2017, though we also trace the evolution of

some systems prior to this “recent period.” While this Chapter presents an overview of cross-country patterns, Annex 1 provides additional details on specific country examples.

A. Diverse Institutional Arrangements and Legal Foundations

Institutional Arrangements

The institutional arrangements for Social Registries vary across countries, both centrally and locally. There is no blueprint or single model that should be replicated across countries. Contextual and institutional factors determine what is appropriate for each country.

Arrangements for managing and operating Social Registries at the central level vary significantly across countries. Several “models” for central arrangements for managing and operating Social Registries can be observed (Box 8). **First**, the most common model in our sample of 20 countries is that the Social Registries are hosted, managed, and operated by a “central social agency,” such as a social protection ministry. Country examples of this model include: Azerbaijan, Chile, Djibouti, Georgia, Macedonia, Mauritius, Mexico, the Philippines, Senegal, Sierra Leone, Turkey, and Yemen (Box 8). In most cases, these central agencies also share information from the social registry with other “user programs” and partner agencies via data sharing agreements. **Second**, another model involves arrangements whereby the “central social agency” hosts and manages (“custodian”) the Social Registry, but outsources implementation to an operating agent. Examples include Brazil, Mali, and Montenegro. In the cases of Brazil’s *Cadastro Unico* and Montenegro’s SWIS, the outsourcing is done via a performance contract. Again, data sharing arrangements govern the use of Social Registry information for the purposes of use by other programs managed by other agencies. A **third** model involves some other “central agency” that manages and operates the Social Registry, but is not otherwise involved in implementing social programs. Examples include Colombia’s SISBEN, which is managed by the National Planning Department, Dominican Republic’s SIUBEN which is managed in a specialized unit under the Social Cabinet within the Vice Presidency, and Indonesia’s UDB, which has been managed and operated by TNP2K within the Vice Presidency (although these arrangements are in transition). **Fourth**, another model is for a specific social program agency to manage and operate the Social Registry, but share information with other social programs and institutions; such is the case with Pakistan’s NSER, which is managed under a unit within the BISP program agency. **Finally**, China’s Dibao Registry is managed in a decentralized way and data management tasks are mostly carried out at local government units.

One key aspect of these diverse institutional arrangements is the degree to which Social Registries can serve as an “honest broker” or custodian of data for multiple institutions and levels of government. Data sharing across agencies requires a significant degree of credibility and trust, in addition to information security. In some instances, it is “easier” for a social program to build a social registry for its own needs than to build and manage a social registry as an integrated gateway for multiple programs. In some instances, it is “easier” for a social program to collect its own information as a self-contained system than to access information of other agencies via data exchange. Numerous factors come into play in determining these arrangements, including power dynamics, institutional capacity and credibility, information quality and security.

| Box 8 – Central Arrangements for Managing and Operating Social Registries: Country Examples | |
|--|--|
| Managed and Operated by Central Social Agency | <ul style="list-style-type: none"> • Azerbaijan VENTAS: Ministry of Labor and Social Protection and Population • Chile RSH in SIIS: Ministry of Social Development • Djibouti RSU: Secretariat of State for Social Assistance • Georgia TSA Registry: Social Services Agency in the Ministry of Labor, Health, and Social Assistance (MoLHSA) • Macedonia CBMIS: Ministry of Labor and Social Policy • Mauritius SRM: Ministry of Social Security, National Solidarity, and Reform Institutions (MSS) • Mexico SIFODE: Ministry of Social Development (SEDESOL) • Philippines Listahanan: National Household Targeting Office (NTHO) within the Department of Social Welfare and Development (DSWD) • Senegal RNU: General Delegation for Social Protection and National Solidarity • Sierra Leone SPRINT: National Social Protection Secretariat, National Commission for Social Action • Turkey ISAS: Social Assistance Directorate General (SADG) in the Ministry of Family and Social Policies (MoSFP), although TUBITAK provides system maintenance and development of new software modules • Yemen: Social Welfare Fund manages the registry |
| Managed by Central Social Agency; Implemented by Separate “Operating Agency” | <ul style="list-style-type: none"> • Brazil Cadastro Unico: host managing agency = Ministry of Social and Agrarian Development manages; operating agency = <i>Caixa Economica Federal</i> (federal bank) via performance contract • Mali RSU: host managing agency = Ministry of Solidarity and Humanitarian Action; operating agent = Technical Unit of the RSU (UTGFS); also guided by a Steering Committee (political body) and Technical Committee • Montenegro SWIS: host managing agency: General Directorate for Information and Analysis within the Ministry of Labor and Social Welfare; operating agent: contracted IT company |
| Managed and Operated by Other Central Agency (specify which) | <ul style="list-style-type: none"> • Colombia SISBEN: National Planning Department, which is not involved in implementing social programs but manages SISBEN and pushes information to user programs • Dominican Republic: SIUBEN unit under the Social Cabinet within the Vice Presidency • Indonesia UDB: Institutional arrangements in transition; to date, the UDB has been managed and operated by TNP2K until MoSA builds capacity to undertake these functions |
| Managed and Operated by Specific Program, and serving other agencies | <ul style="list-style-type: none"> • Pakistan NSER: hosted, managed and operated by BISP’s NSER Wing, headed by a Director General. The Wing also caters to requests from other agencies for information, and is supported by MIS unit of BISP for information management and safety. |
| Managed Centrally, Implemented in Decentralized Manner | <ul style="list-style-type: none"> • China Dibao Registry: Ministry of Civil Affairs and local governments’ Civil Affairs Offices manages, but system is implemented by local governments |
| Source: Authors’ compilation from direct World Bank experience with Social Registries and/or country documentation | |

There is even more diversity in the arrangements for managing citizen interface – and these vary significantly depending on whether registration methods are carried out “on demand” or “en masse.”

- Within the countries using *on-demand methods*, all Social Registries – except Azerbaijan -- receive applications at local offices, but the jurisdiction of those offices vary (Box 9). Some are deconcentrated offices of the central agency, as in Georgia, Macedonia, Montenegro, Mauritius, and Turkey. Others are offices of local governments, such as municipalities, as is the case for Brazil, Chile, and Colombia (on-demand window). When central agencies work through autonomous local governments, they typically have to enter into formalized partnership collaboration agreements with each of the local government units. For example, in Brazil, citizen interface functions of the *Cadastro Unico* are implemented at local level via 5570 autonomous municipalities according to specific “terms of adhesion” agreements, performance monitoring, and performance incentives for administrative cost sharing subsidies from federal government.⁴³ Finally, in some countries, such as Mexico’s SIFODE, the social programs themselves serve as the “window” for citizen interface such that people apply via any of the “user programs” using a common application form, and their

⁴³ Lindert et. Al. (2007) and Mostafa and Safyro (2014).

data is then transmitted to the Social Registry to allow them to be considered for a range of benefits and services. Several countries in our sample (also) use digital service windows, allowing for electronic applications via personal devices (computers, tablets, mobile phones) or e-government kiosks or offices. Examples include Azerbaijan, Chile, and Turkey (initial application). Interestingly, in Azerbaijan, the VEMTAS registry only accepts applications online. The reasoning behind this was to eliminate face-to-face contact in order to reduce the potential for corruption and bribes.

- Within the countries in our sample that use *en masse registration waves* (either nationwide or in specific areas), most use contracted field teams, sometimes in combination with community responsibilities (Box 9). Field teams typically include coordinators, supervisors, enumerators, encoders and verifiers. In the Philippines, field teams are contracted by the local NHTUs, but, importantly, the teams are not assigned to work in areas they are from, in order to reduce the potential for conflicts of interest. Pakistan has (primarily) outsourced field work to firms in specific geographic areas, with a separately contracted firm to supervise and check the field work. The Dominican Republic used to rely on NGOs, but is now planning for SIUBEN to contract and supervise field teams directly for the upcoming registration wave. The exception is the UDB in Indonesia, in which data were collected by the Statistics Agency for the 2015 registration wave.

**Box 9 – Diversity in Institutional Arrangements for Local Roles for Citizen Interface
for Intake & Registration in Social Registries: Country Examples**

| | | |
|--|---|--|
| On-Demand Intake & Registration | Via Deconcentrated Local Offices of Central Agency | <ul style="list-style-type: none"> • Georgia TSA Registry: On demand applications and other citizen interface responsibilities carried out by local and regional Single Window Offices of the Social Services Agency (SSA) of MoLHSA • Macedonia CBMIS: Via Municipal Centers for Social Work (MCSW) • Mauritius SRM: On demand applications at the local Social Security Office • Montenegro SWIS: Electronic applications are filled out by staff for each applicant at local municipal Centers for Social Work (CSW), which also review and approve all applications.⁴⁴ • Turkey ISAS: Initial applications are electronic, but home visit and full questionnaire carried out by staff from local SASF offices |
| | Via Local Municipal Government Offices | <ul style="list-style-type: none"> • Brazil Cadastro Unico: Implemented at local level by autonomous municipalities • Chile RSH in SIIS: Implemented at local level by autonomous municipalities • Colombia SISBEN:* Applications can be filed on demand via municipal offices, which then carry out the home visit to collect data using the standard questionnaire that is also used in the en masse registration. • China Dibao Registry: Implemented by local governments |
| | Via a Common Application submitted to various Social Programs (and serving other programs) | <ul style="list-style-type: none"> • Mexico's SIFODE: Applications processed via the numerous social programs that use SIFODE using a Common Application Form for intake and registration. Data then transmitted from the programs to the SIFODE Social Registry in SEDESOL. Institutional arrangements for entry via each program vary according to the program (e.g., applications via PROSPERA, the largest user program, are managed by deconcentrated PROSPERA offices). When people apply via a specific program using the Common Application Form, they can be considered for numerous benefits and services. |
| | Via Online (digital service windows) | <ul style="list-style-type: none"> • Azerbaijan VEMTAS: electronic applications through individual devices (computers, mobile phones, etc.), special e-government kiosks, or kiosks at post offices • Chile RSH in SIIS: online applications through individual devices or at municipal offices • Turkey ISAS: online applications (for initial application) |
| En Masse Registration Waves | Contracted Field Teams | <ul style="list-style-type: none"> • The Philippines Listahanan: 2015 registration wave (as well as earlier waves), field teams contracted by the local NHTUs under NHTO/DSWD. • Colombia SISBEN:* For periodic <i>en masse</i> registration, DNP contracts field teams through FONADE. Financing for the field work primarily comes from DNP, but also with some municipal contributions in the larger municipalities. • The Dominican Republic SIUBEN: 2017-19 registration wave • Yemen SWF: Staff from the Social Welfare Fund plus consultants for the original 2008 registration wave. Updates of specific information are carried out from time-to-time for both beneficiaries of the SWF cash transfer and non-beneficiaries via District Offices of the SWF |
| | Communities + Contracted Field Teams | <ul style="list-style-type: none"> • Djibouti RSU: ongoing expansion • Mali RSU: ongoing expansion • Senegal RNU: ongoing expansion • Sierra Leone SPRINT: ongoing expansion. Original intake is done by communities and contracted teams using mobile technology, but subsequent updates are carried out at district level (e.g., for changes in household recipient, demographics, location, etc.) |
| | Outsourced (primarily to firms) | <ul style="list-style-type: none"> • Pakistan NSER: In original registration wave (2010-11), BISP bid out the field work to contracted firms, distributed geographically. They then hired another firm to supervise and check the work of the front-line field teams. Second wave (2016-18) is now underway using a mix of methods, including contracting of firms for field staff and supervision and some piloting of on-demand methods. Most households are likely to be repeated in both waves, making it a very large panel exercise (27+ million households) |
| | Contracted to NGOs | <ul style="list-style-type: none"> • The Dominican Republic SIUBEN: Previous registration waves |
| | Statistics Office | <ul style="list-style-type: none"> • Indonesia UDB: 2015 registration wave |

Source: Authors' compilation from direct World Bank experience with Social Registries and/or country documentation.

*Colombia's SISBEN carries out *en masse* registration waves every 5 years, but does have an "open window" for on-demand applications via municipal offices, with about a quarter of registrants entering through on demand since the last round of *en masse* registration in 2011

Some countries build Integrated Social Registries on the basis of existing Beneficiary Registries for a specific program. One example of this is Egypt, which is building a Unified National Registry (UNR) from the existing beneficiary registry for the Family Smart Card System for food subsidies. The UNR is now also importing data from other programs, such as the Takaful and Karama conditional cash transfer program, Social Pensions, Pensions and other agencies. Further details on Egypt’s ongoing experience are included in Box 10. For now, development of UNR capabilities has primarily focused on the back office for information management. As these capabilities are strengthened, one question that arises for these types of systems is whether or not they will develop front-office capabilities to support intake and registration that would allow people to apply for a range of benefits and services supported by the system. Examples from our cross-country sample discussed above shed some light on options that could be pursued to develop these capabilities. One option would be to rely on the intake and registration procedures of specific social programs, but to develop a common application form that could be used for all programs so that when individuals or families apply for one program, they could be considered for many programs via the common application and unified social registry information system. As discussed above, Mexico’s SIFODE is one example of this model. Another option would be to develop a common application form for the social registry per se that serves many programs and is received at local offices. Examples of this model include Georgia’s TSA registry, which accepts the common application via its Single Window local offices of the SSA; or Brazil’s which accepts the common application via local municipal offices.

Another variation in institutional arrangements in the context of large federal countries, which adopt numerous approaches to Social Registries across “states” or “provinces.” Not all federal countries operate national Social Registries. For example, in the United States and Canada, responsibilities for social programs is decentralized to the states (US) and provinces (Canada). In those countries, each state (province) is responsible for building or procuring the information systems needed to support the Social Registry functions of registration and determination of eligibility, usually within the context of broader integrated social protection information systems that also support beneficiary registries and benefits administration. Responsibilities for citizen interface (intake, registration, updating, etc.) are then carried out by local government units (e.g., at the county level in the US).⁴⁵ Other federative countries *do* operate national Social Registries. Examples include Brazil’s *Cadastro Unico* (which is managed by the federal MDSA and implemented by autonomous municipalities, with some limited support by the states), Mexico’s SEDESOL, Pakistan’s NSER (which is managed by the central government’s BISP Program), and Australia’s Centrelink. In some countries, a “national social registry” is built on the basis of existing sub-national registries, as in the case of Nigeria (see Box 11).

A key question facing federal countries is: do we need a national social registry? The answer to this often depends on the constitutional or legal jurisdiction over social assistance, financing arrangements, and “path dependence.” Putting aside those country-specific aspects, however, the question itself is worthwhile. Some key reasons for operating a national Social Registry⁴⁶ include: (a) the context of implementing one or more federally-funded programs; (b) a desire to ensure citizens are treated fairly and “equally” (or equitably) across the country according to implementation of programs, uniform or standardized eligibility criteria, time limits and procedures for updating requirements, and other service standards.; (c) redistributive objectives, to ensure that resources “follow the poor” across the country; (d) efforts to reduce the potential for “duplicate” applications

⁴⁴ The CSWs are public institutions funded by the state and managed by a board comprising of three representatives (one for the municipality, one for the state, and one for the staff). There are 10 CSWs in Montenegro, with affiliates and branch office so that all municipalities are covered. Each CSW is staffed with (at least) a case manager (social worker) and a lawyer.

⁴⁵ Lindert (June 2005).

⁴⁶ With *beneficiary registries*, additional justifications for national systems would also include the need for a national registry to avoid duplications in enrollment or benefits across jurisdictions (states) and the objective of enforcing time limits on receipt of program benefits (so that people cannot move across states to continue benefitting even after their official time limits for support have expired).

in multiple jurisdictions; (e) efficiency, in terms of “buying” (procuring), “building” (developing), and maintaining Social Registry systems; and (f) a desire to promote transparency and accountability in use of federal funds.

Box 10 – Building an Integrated Social Registry from an Existing Beneficiary Registry: the Case of Egypt

Egypt, which is building a Unified National Registry (UNR) from the existing beneficiary registry for the Family Smart Card System for food subsidies. The UNR is now also importing data from other programs, such as the Takaful & Karama conditional cash transfer program, Social Pensions, Pensions and other agencies.

More specifically, **the Food Smart Card System** for food subsidies covers about 17 million households, or 70% of the population.

More recently, the Ministry of Social Solidarity (MOSS) has designed and launched the Takaful & Karama conditional cash transfer program. Citizens apply for the T&K Program at Social Units at the district level on an on-demand, continuous basis. The **T&K Social Registry** maintains information on all applicants, currently covering about 2.4 million households or 10% of the population (and with about 1.7 million households deemed eligible and enrolled in the program). Database management for the Social Registry is central, hosted at the service provider’s data center as well as MOSS headquarters. Data are verified via interoperability with civil service registry, other social programs (contributory and non-contributory pensions) and National IDs.

Egypt is now working on the development of the Unified National Registry (UNR) first on the basis of the existing *beneficiary* registry for the Family Smart Card System for food subsidies (and thus with coverage of about 17 million households, or 70% of the population). Data are to be imported from the Food Smart Card beneficiary registry and other systems. The system is expected to have online connections with at least 5 databases: the Food Subsidy System (as its base), the T&K Social Registry in MOSS, the registries in MOSS for social pensions and contributory pensions, and the Ministry of Education. It also has offline connections with four databases: Insurance-MOSS, NGOs-MOSS, Central Agency for Organization & Administration, Ministry of Higher Education, plus limited connection with sample datasets of the Income Taxes and Commercial Registry systems.

For now, development of UNR capabilities has primarily focused on the back office for information management. As these capabilities are strengthened, one question that arises for these types of systems is whether or not they will develop front-office capabilities to support intake and registration that would allow people to apply for a range of benefits and services supported by the system. These could either be developed via existing intake and registration channels for social programs (e.g., using a common application form) or via a common application form specifically for the UNR that would allow citizens to apply for numerous programs.

Some countries that have not developed national Social Registries have sought remedies to patch over this gap in systems across states. An alternative to operating centralized national registries can involve the ability to “link” sub-national systems via sophisticated interoperability mechanisms such as data virtualization. As discussed above, key ingredients for interoperability include a common set of identifiers (or unique ID) and harmonized data definitions and structure of data management. Other remedies include: (a) carrying out federal random-sample reviews of sub-nationally implemented social programs, reviewing applications for both those who were deemed eligible and enrolled and those who were not to test for accuracy and consistency across jurisdictions (e.g., across states); and (b) setting federal guidelines for “systems integrity” for Social Registries operated by sub-national entities (e.g., by states). All three of these alternatives are employed in the US, which lacks a national registry despite original plans to develop one to support the operation of federally-funded programs (such as food stamps / SNAP, Temporary Assistance for Needy Families/TANF, or Medicaid).⁴⁷ First, the Public Assistance Recording System (“PARIS MATCH”) allows states to upload and cross-check data on a quarterly basis, using a standardized format for data exchange to detect duplicate entries across states

⁴⁷ Lindert (June 2005) and other Information on US systems.

according to voluntary cross-state MOUs. Second, the Food Stamps (SNAP) Program is implemented at the state level, but the Federal Government requires states to conduct rigorous random sample reviews (with subsequent Federal random-sample re-reviews) of their registration and eligibility systems (“Social Registries”) to test the accuracy of eligibility and enrollment decisions for approved and non-approved beneficiaries. Penalties are levied on states when these reviews yield excessive error rates. And third, federally-funded and guided programs (with national standard eligibility criteria), such as the Food Stamps SNAP and Women-and-Infant Children (WIC) Programs, have developed “Systems Integrity Tools” to review state social registration and eligibility (“Social Registry”) systems according to specific systems standards for both business processes along the delivery chain (intake, registration, determination of eligibility, calculation of benefits) and information systems structures and functions.⁴⁸

Box 11 – National and Sub-national Level Social Registries The Case of Nigeria

Nigeria is a federal country with a great degree of state autonomy. The Government is developing a National Social Registry (NSR) as an electronic list of individuals representing in the first stage 4 million poorest and most vulnerable households. The NSR will serve as a policy instrument for social development in the country, whereby social programs, including for health, education and social protection, at Federal and State levels will, over time, be able to use a single common social registry to identify the poor and offer targeted benefits. It will constitute a Federal-level NSR with a federal “host agency” and with States managing intake and registration.

The Federal-level “host agency” for the NSR will be established under the National Social Safety Nets Coordinating Office (NASSCO) in the Office of the Vice-President to hold information about the poorest and vulnerable households in the country. Information will be fed by States following the NSR guidelines and procedures. As in the case of Brazil and Colombia, formal Memorandums of Understanding between the federal level and each participating state will be signed to set out the respective roles and responsibilities of the state. State level administration will be housed in the State Office Coordinating Units set within the Ministry of Planning of each state. This process will build on the registries already being developed and used by 8 states, but aims to harmonize variables, information collected and systems in place in each Nigerian State. Registration of the population is the responsibility of states through local government authorities, supervised and assisted by NASSCO, using a combination of geographic and community-based targeting.

Legal Foundations

It is important for a Social Registry to be supported by a policy and legal framework. While the choice of instruments will vary depending on the country, this framework should make explicit the roles and responsibilities of different actors, the purpose and use of the Social Registry, rules governing the use of the information provided, the rights and obligations of the population providing information, including data privacy, data exchange procedures and control mechanisms. Countries where a Social Registry has been in place for some time have developed a formal legal and policy framework for it consisting of guiding principles, laws, rules, regulations, procedures, as well as managerial, financial and administrative mechanisms. Box 12 summarizes some of the key elements of this framework for four countries – Brazil, Colombia, Philippines, and Chile.

The legal and regulatory framework often evolves, as the information in Box 12 demonstrates. Refinements to the legal and regulatory framework and institutional arrangements usually takes place over an extended period of time and continuously evolves as improvements are made and as overall social safety net policy develops. For example, in some countries, a Social Registry may be developed initially for one program, but later be given a larger more autonomous role within the national social protection system, requiring a corresponding modification of the legal framework (Philippines). There is also a mix between a high level legal framework

⁴⁸ Lindert (June 2005). USDA (2015). Numerous documents on PARIS MATCH System.

(including Presidential decrees in several cases) and more detailed operating rules that are usually contained in administrative circulars. Both are important for establishing a solid (but usually evolving) foundation for a Social Registry. The specific instruments used reflect country context. In several cases, Presidential Decrees have been used, but alternative mechanisms such as Cabinet documents have been used in other cases (Colombia, for example).

Usually, countries use a mix of laws, decrees, regulations, and operational guidelines to support Social Registries. Typically, the legal framework includes the following types of information: (a) legal foundations for the Social Registry; (b) identification in broad terms of the main actors and institutions, and their roles and responsibilities (including obligations of citizens); (c) the basic framework for the Social Registry, including key definitions in terms of the social assistance unit (individuals, families, households); concepts and variables; and other aspects; (d) overview of core business processes for outreach, intake and registration, determination of eligibility, grievances, appeals, remedies, and so forth; (e) treatment of citizen rights, including access to, use, privacy, and protection of personal data; (f) identification of the programs and other uses for the instrument; (g) consequences for the provision of false information or unauthorized use of data, and so forth. When local governments (such as municipalities) handle citizen interface (for intake, registration, updating), inter-governmental agreements are needed to set out respective roles and responsibilities, monitoring and performance, and cost-sharing arrangements. These legal instruments are usually complemented by Memorandums of Understanding for data sharing protocols between institutions, and the broader information security legal framework, as discussed in Chapter 4.

A. Diverse Typologies and Trajectories of Social Registries as Inclusion Systems

There is considerable variation across countries in terms of the social policy roles of their Social Registries as inclusion systems. This section first takes stock of the current coverage of Social Registries for the countries in our sample. It then reviews the use of Social Registries across countries in terms of whether or not they serve single or multiple programs. It then traces the typologies and trajectories of these systems across countries, and for some, over time as they have evolved in their capacities as “integrated” and “dynamic” gateways for inclusion. The section ends with a summary Table 3 that presents a typology of various approaches to Social Registries as *inclusion systems* with respect to their advantages, challenges, key ingredients, and country examples.

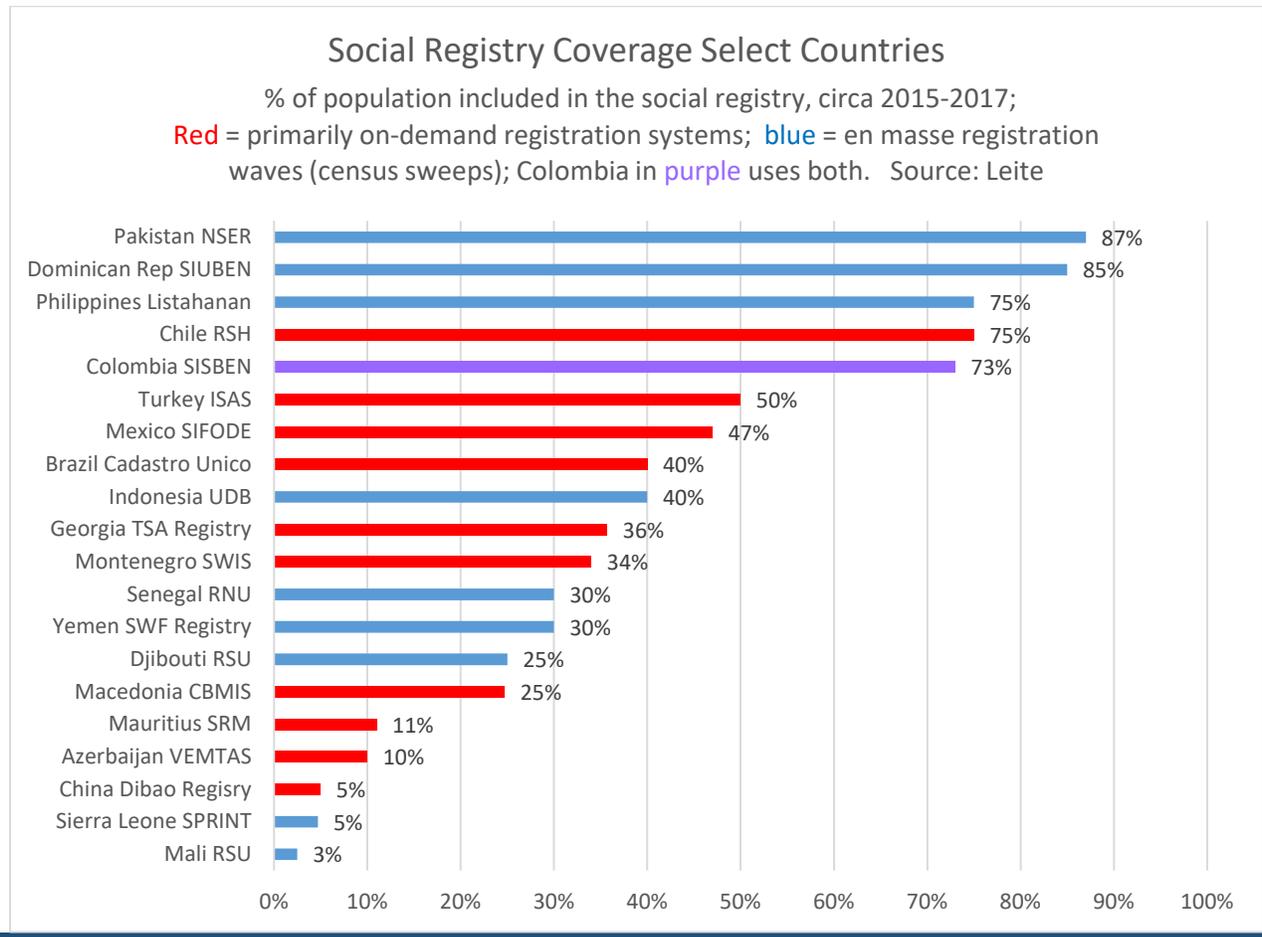
Diversity in Population Coverage of Social Registries

As inclusion systems, actual coverage of Social Registries varies significantly across countries (Figure 9). Some Social Registries cover a huge majority of the population, such as those in Chile, Pakistan, the Philippines, the Dominican Republic, and Colombia. Others cover between one third and one half of the population, including Montenegro, Georgia, Indonesia, Brazil, Mexico, and Turkey. Others operate on a smaller scale, ranging between 3% (Mali) and 30% (Senegal, Yemen) of the population included in the Social Registries (Figure 9).

Box 12 – Diverse Legal Frameworks for Social Registries

| Country/SR | Formal Policy and Legal Framework |
|---|---|
| Brazil/Cadastro Unico | <ul style="list-style-type: none"> • 2001 Presidential Decree establishes Cadastro Unico • 2004 Law establishing the Bolsa Familia Program refers to CadUnico as the tool for selecting beneficiaries • 2005 legislation improved CadUnico by defining with more clarity the goals, processes, tools and the respective competencies of the federative entities involved and by reaffirming its purposes. • 2007 legal ordinance defines the procedures and concepts necessary for its management, as well as the role of the federal government, states and municipalities • 2012 government directive established the procedures for managing the CadUnico |
| Colombia/SISBEN (System for Identification of Potential Beneficiaries of Social Programs) | <ul style="list-style-type: none"> • 1995 Social CONPES (Council for Economic and Social Policy) establishes SIBEN as the targeting instrument for all programs that subsidize demand. • 2001 Article 94 of Law 715 of 2001: Social CONPES will define every 3 years the criteria for the determination, identification, and selection of beneficiaries • 2007 Article 24, Law 1176 defines respective roles and responsibilities of the National Planning Department and local governments • 2010 Decree 1192 defines the cut-off dates, clarifies definitions of the database. |
| Philippines/Listahan (formerly the National Household Targeting System for Poverty Reduction -NHTS-PR). | <ul style="list-style-type: none"> • 2007 Executive Order of the President created the NHTS-PR to identify poor households that could benefit from the CCT program • 2008 Department Order NO. 1 adopted the NHTS-PR Targeting System as a mechanism for identifying potential beneficiaries of DSWD Social Protection Programs and Services • 2009 National Statistical Coordination Board (NSCB) Resolution NO. 18 recognized and enjoined support to NHTS-PR being implemented by the DSWD as a tool to Identify beneficiaries of social protection programs. • 2010 Executive Order 867 adopted the NHTS-PR as the mechanism for identifying poor households who shall be recipients of social protection programs nationwide |
| Chile/Registry of Social Information (RIS) and Registro Social de Hogares (RSH) | <ul style="list-style-type: none"> • 2004 Law 19.949 that creates the Social Protection System Chile Solidario requires the Ministry of Planning to design, implement and administer the RIS • 2007 Supreme Decree No. 160 approves the regulations for the RIS, including the obligation of the Ministry of Planning to reach agreement with other institutions and regulating the processes of information exchange • 2009 Law No. 20.379 establishes the RIS as one of the instruments to manage the Inter-sectoral Social Protection System • Decree 22 of 2015, which regulates Article 5 of Law 20379 and establishes the RSH |
| Source: Jones (2016) | |

Figure 9 – Population Coverage of Social Registries, Select Countries, Circa 2015-17⁴⁹

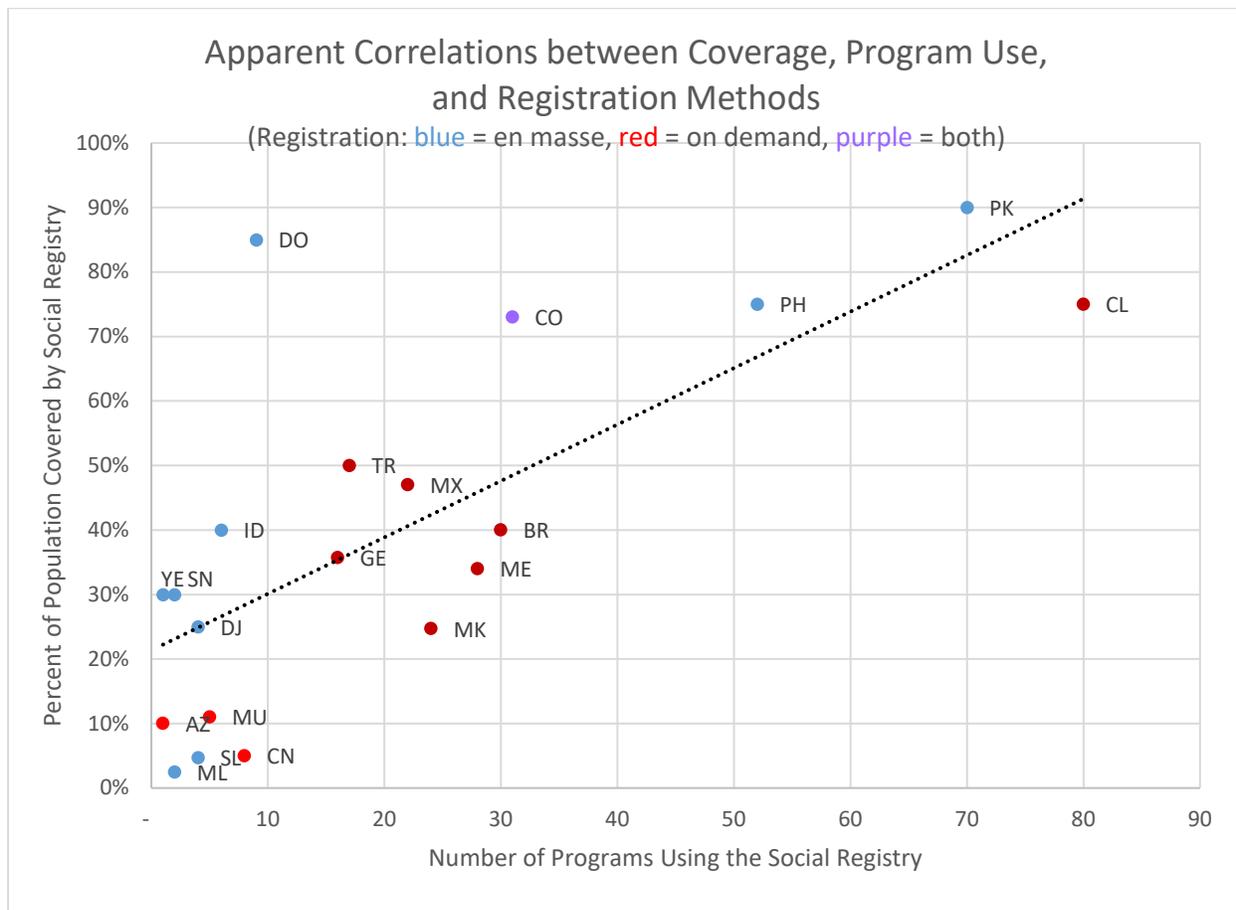


This variation in coverage can reflect a range of factors, including whether or not the registry is implemented on a nationwide basis (vs only in specific areas), the relative size of the target population, the “maturity” of the registry (if it is relatively new or has been operating for many years), the modality of data collection (on demand vs. masse), and whether or not the Social Registry serves one or multiple programs.

Figure 10 suggests a fairly strong correlation between coverage of the population and the number of programs served by the registry. In general, the larger the number of programs that use the registry, the larger the coverage. As discussed in the next section, many countries use Social Registries for numerous programs, which can represent a large range of benefits and services in social assistance and beyond. Figure 10 also reveals some interesting patterns with respect to the correlation between coverage of the social registry and the method used for intake and registration, as discussed below.

⁴⁹ Data on coverage of China’s Dibao Registry is under-estimated as available information was for beneficiaries only, even though the registry does collect information on all applicants.

Figure 10 – Apparent Correlations between Coverage, Program Use, and Registration Methods⁵⁰



Social Registries that rely on *census-sweep data collection methods* often start with limited coverage, but then get quite large as they mature and reach nationwide scope. Examples of countries that are still early in this process include Sierra Leone and Mali (see Box 13). Some countries have moved from small “pilot” data collection efforts to large nationwide systems with high rates of coverage. Examples of countries that are undergoing expansion include Djibouti and Senegal (Box 13). The *Listahanan* in the Philippines expanded from an initial pilot of 7,000 households in 2007 to covering 75% of the population by the 2015 nationwide update. Pakistan’s National Socio-Economic Registry is another example, whereby a nationwide registration wave resulted in coverage of 87% of the population over a period of three years (Figure 9). Because the overall cost of these census approaches can be expensive, both in terms of budget and in terms of capacity and resources, in many countries, they are carried out infrequently – usually every 4-5 years.

With on-demand application methods, there is a certain degree of “self-selection” in Social Registries. Some individuals and families may not take the time to go register if they perceive that they are out of range of eligibility for the program(s) that use the Social Registry. As such, the percent of population covered by on-demand Social Registries may be somewhat lower than those that adopt a supply-driven “census sweep” approach, when comparing Social Registries with nationwide coverage. Self-selection also depends on the narrowness of eligibility criteria for programs using the Social Registry. Azerbaijan’s VENTAS only covers 10% of

⁵⁰ Data on coverage of China’s Dibao Registry is under-estimated as available information was for beneficiaries only, even though the registry does collect information on all applicants.

the population because it only serves one program that has fairly tight eligibility criteria. In contrast, Chile's RSH has higher coverage, largely due to the fact that it serves over 80 programs, including some that are near universal. Other examples of on-demand application systems cover in the range of one-third to one half of the population, such as Montenegro's SWIS, Georgia's TSA Registry, Brazil's Cadastro Único, Mexico's SIFODE and Turkey's ISAS.

Indeed, an experiment with mixed data collection methods indicates the value of self-selection via on-demand applications. Specifically, a paper by Alatas et. al. (2016) reports on a village-level experiment in Indonesia that compared the outcomes of census-sweep and on-demand methods for a cash transfer program. In the experiment, some areas implemented the registration process via census sweep approach, whereby mobile teams would go to the communities to register everyone in the area. In other areas, an on-demand approach was adopted, whereby households had to physically go register themselves. In both areas, the same criteria and methods were used for assessing socio-economic status. The study found that on-demand methods did indeed result in some degree of self-selection by the non-poor, who make up the bulk of the population. Many of the non-poor opted not to apply, presumably perceiving the time costs of registering were not worth it. Furthermore, the study found that the on-demand method improved the targeting outcomes of the program, with a higher likelihood of the poor being registered. Nonetheless, active outreach methods are still encouraged to promote awareness of the poor and marginalized to ensure they have access to registration.

Box 13 – Starting from Scratch: Social Registries in Djibouti, Mali, and Senegal

For many countries, a common starting point involves building a Social Registry “from scratch” via *en masse* registration waves, first in limited geographic and then moving towards larger coverage. *En masse* registration waves are usually carried out to fill a real void in information on individuals and households, their characteristics, their geographic location, or their needs and conditions. In many developing countries, this information either doesn't exist or isn't reliable because it is out-of-date, incomplete, or of questionable quality. As such, teams travel to communities to register all or most households (hence the term “census sweep”). In many cases, the initial reach of these registration waves is small, limited to specific geographic areas, but with the intention to expand as capacity and funding permit.

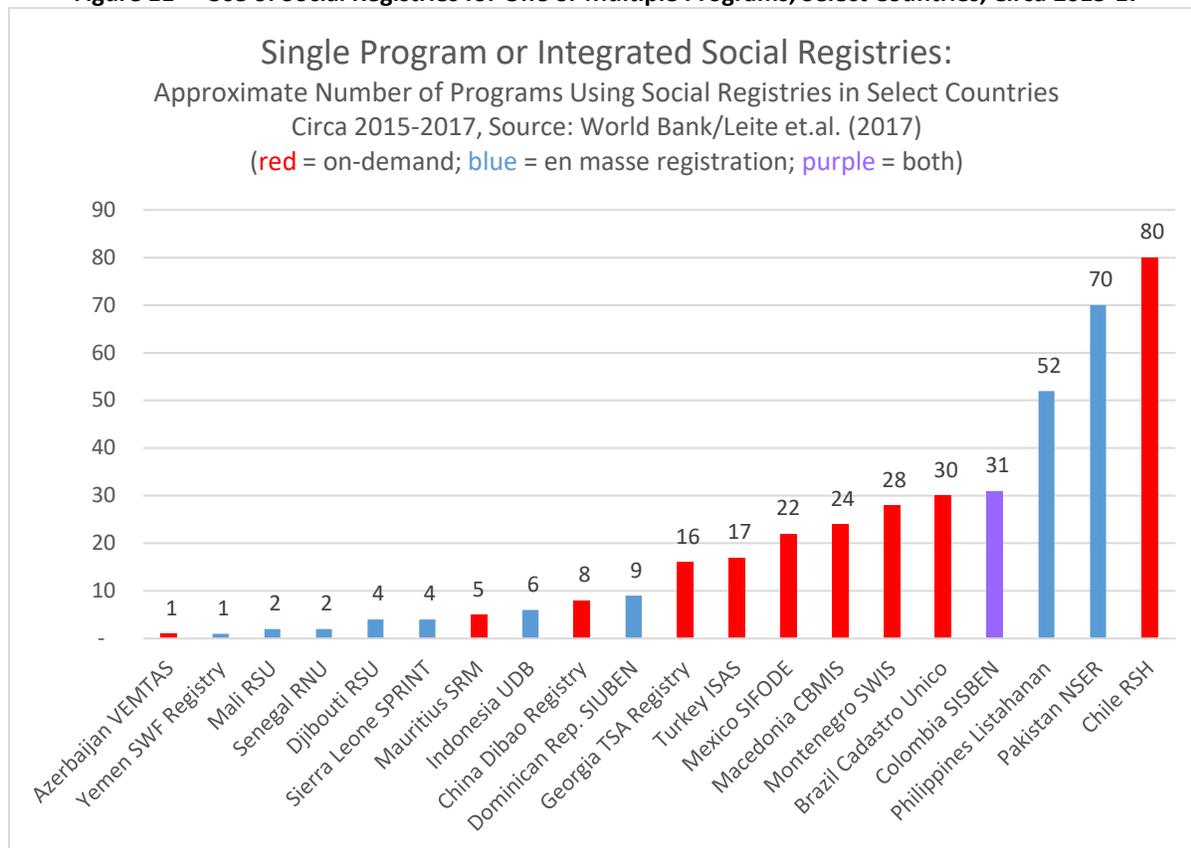
- **Mali's Social Registry** was designed to support the business processes of the JigisemeJiri Program (unconditional cash transfer, UCT), but already in consultations with other sectors and actors with the intentions of converting it into a National Social Registry for multi-program use. Nowadays, JigisemeJiri Social Registry is already being utilized by the direct cash transfer as well as the health insurance program managed by the Minister of Health/Agence National d'Assurance Medicale. In the upcoming months, it will incorporate public works and income generating activities programs, as well as being scaled up for reaching national coverage. Current coverage is still limited to 3% of the national population.
- **Senegal's Social Registry** was designed to support the business processes of the Bourse de Sécurité Familiale Program (conditional cash transfer, CCT), but already in consultations with other sectors and actors with the intentions of converting it into a National Social Registry for multi-program use. Two years after the start, it was separated from the CCT program and was managed by its own team with its own processes. Nowadays, the Social Registry is already being utilized by two major governmental safety nets programs and several other NGO programs. It covers around 30% of population and has a national coverage (every neighborhood or village is targeted).
- **Djibouti's Unified Social Registry (RSU)** builds on initial efforts to carry out a “census-survey-sweep” approach in selected areas that were chosen to receive “emergency” interventions. The system is evolving, however, and the initial Social Registry created for the “emergency” program is shifting to a large program (Programme National de Solidarité Famille - PNSF) that will facilitate people's access to multiple programs and will accommodate new features, such as adding biometric information for improving interoperability of the RSU with other systems in the future. As of 2017, the RSU serves four programs and covers about 25% of the population.

Some countries develop and use Social Registries to provide access to a single program. As discussed above, these are usually developed not as separate entities, but as part of the end-to-end implementation processes and systems supporting that particular program. This has the advantage of building the system to meet the specific needs and eligibility criteria of that particular program. In our sample of 20 countries, Yemen's SWF Registry and Azerbaijan's VEMTAS Registry each serve only one program (in both cases, an unconditional cash transfer program). In Azerbaijan's case, that program is narrowly targeted as a "last resort program" for the extreme poor, and applicants registered in the Social Registry represent only about 10% of the population. In the case of Yemen, the SWF cash transfer program was developed to support the extreme poor (which represent a relatively larger share of the population), and those registered in the Social Registry (both beneficiaries and non-beneficiaries) represent about 30% of the population.

Increasingly, many countries are using "Integrated Social Registries" as a common gateway for coordinating registration and eligibility processes for multiple social programs (Figure 11), as discussed in Chapter 3. In many countries, the decision to move towards multi-program use of a common Social Registry is the result of an explicit Government policy decision (e.g., in Brazil, Chile, Colombia). In other countries, as the quality and credibility of the one program's Social Registry improved, other programs started using that Social Registry instead of carrying out their own intake and registration procedures (e.g., Pakistan). Either way, multi-program use of a Social Registry requires adoption of harmonized eligibility concepts across programs (even if specific criteria or thresholds differ), use of a common intake questionnaire, inter-institutional coordination and data sharing agreements, and capabilities for data exchange and information security. Some countries are just moving into multi-program use of Social Registries, as is the case of Mali, Senegal, Djibouti, Sierra Leone, Mauritius, and Indonesia. Others have embraced this model in an extensive way, with *numerous* benefits and services drawing on data from a common "Social Registry," as shown for the Philippines, Pakistan, and Chile in Figure 11.

It is important to note that not all user programs use Social Registries purely for eligibility purposes. Some programs do use Social Registries directly for determining eligibility for social programs. Others use that socio-economic eligibility data from the Social Registry and combine it with additional program-specific information to determine overall eligibility and enrollment decisions for those particular programs. Some programs may be universal, but use data from Social Registries to calculate benefit levels (e.g., for health insurance subsidies). Still others use the information for planning purposes, to assess potential demand for an intervention in a particular area or nationwide. Data produced by Social Registries can also be used for validating information collected through other methods or sources, such as through community-based targeting methods, particularly when they cover similar areas and contain similar sets of data for the same time frame. Still other user agencies and programs use data from Social Registries for analytics purposes, including program evaluations, monitoring, or other assessments. Data sharing protocols and MOUs between the Social Registry and user programs or agencies should clearly govern the use of these data, and these uses should be part of the citizen consent process at the time of registration (or subsequently).

Figure 11 – Use of Social Registries for One or Multiple Programs, Select Countries, Circa 2015-17



The types of programs that use Integrated Social Registries go well beyond social assistance. All of the countries in our sample use their Social Registries for cash transfers (either conditional or unconditional), usually targeted to the poor, vulnerable, or low income groups. Beyond cash assistance, many use Integrated Social Registries to support a wide range of benefits and services, some “targeted” and others “universal.” Examples include social pensions; health insurance or health care subsidies; utility & transport subsidies; education and skills; labor and employment programs; housing programs; sustainable livelihoods; agriculture, land, or environmental conservation; emergency assistance; in-kind benefits, social services; legal services; war veterans benefits; and a range of sub-national programs (often including similar types of benefits and services). Table 2 illustrates examples of the types of benefits and services that use Social Registries across various countries in our sample (non-comprehensive examples). Essentially, these Integrated Social Registries can serve as a powerful “multi-sided platform” across sectors, agencies, and programs.

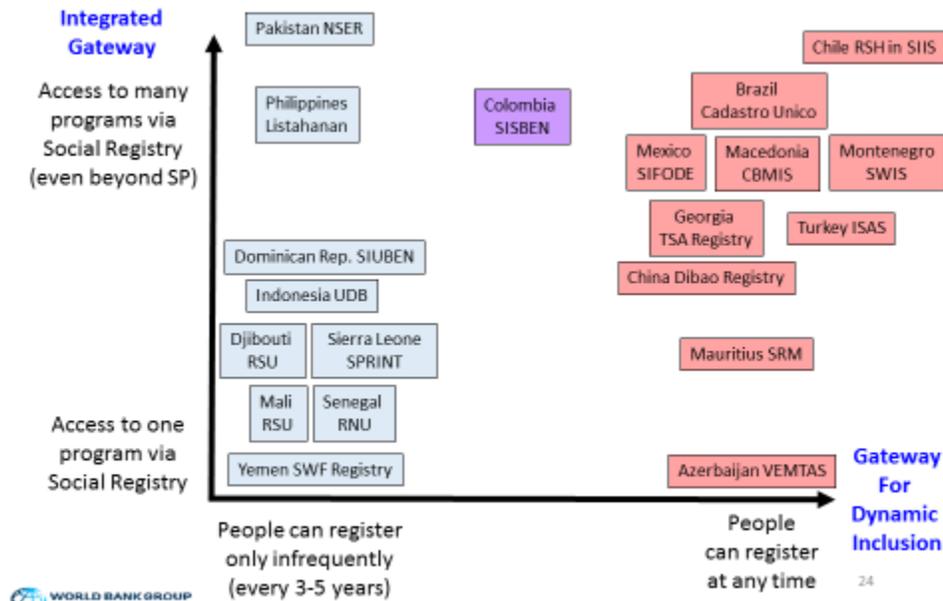
Table 2 – Integrated Social Registries for Social Assistance and Beyond
 Examples of the Types of Programs that Use data from Social Registries,
 Select Countries, Circa 2015-17 (Non-Comprehensive, illustrative listing)

| Types of Programs | Examples of Countries Using Social Registries for these programs |
|---|--|
| Cash transfers (conditional or unconditional) | All 20 countries in our sample |
| Other allowances or income support (such as child or family allowances) | Chile, Georgia, Macedonia, Mauritius, Turkey |
| Social pensions or other allowances for elderly and/or disabled | Chile, Colombia, Georgia, Mexico, Philippines, Turkey |
| Health insurance or health care subsidies | China, Colombia, Dominican Republic, Djibouti, Georgia, Mali, Pakistan, Philippines, Senegal, Turkey |
| Subsidies: heating, energy, gas, utilities, and/or transport | Brazil, Chile, Dominican Republic, Georgia, Indonesia, Macedonia, Turkey |
| Education-related programs, such as scholarships, literacy programs, skills & training, or internships | Brazil, Chile, China, Dominican Republic, Georgia, Indonesia, Philippines, Turkey |
| Labor and Employment programs | Chile, China, Mexico, Philippines, Sierra Leone |
| Housing benefits or housing related programs | Brazil, Colombia, Chile, China, Djibouti, Mauritius, Philippines, Turkey |
| Sustainable livelihoods | Brazil, Mauritius, Mexico, Pakistan, Philippines |
| Agriculture, Land or Environmental Conservation | Brazil, Colombia, Sierra Leone |
| Emergency Assistance, Disasters, Refugees, Migrants | China, Dominican Republic, Djibouti, Mexico, Pakistan, Philippines, Sierra Leone (Ebola) |
| In-kind Programs | Brazil, Georgia, Indonesia, Pakistan, Philippines, Turkey |
| Social Services (Various, e.g., family services, ECD, child services, day care, youth services, HIV/AIDS, foster care, individuals in institutions, etc.) | Colombia, Chile, China, Dominican Republic, Georgia, Mauritius, Montenegro, Pakistan |
| Legal Services | Georgia |
| War Veterans Benefits | Montenegro |
| Sub-national programs | Brazil, Chile, China, Colombia, Georgia, Macedonia, Pakistan, Philippines |

Sources: Compiled by authors using country information.

Our sample of 20 countries reveals interesting patterns in the characterization of Social Registries as inclusion systems. Figure 12 illustrates various typologies of Social Registries according to (a) the degree to which they serve multiple programs (Integrated Social Registries) on the vertical axis; and (b) the degree to which they permit continuous inclusion on the horizontal axis.

Figure 12 – Diverse Typologies and Trajectories of Social Registries as Inclusion Systems



Source: Authors

Many of these systems have evolved over time (and will continue to evolve), and the trajectories of various countries over time illustrate several interesting diverse patterns:

- Integrated but not yet Dynamic.** Many countries have shifted from single-program use to Integrated Social Registries – but without developing capacity for dynamic inclusion (moving up the vertical axis rather than along the horizontal axis of Figure 12). Examples include Pakistan, the Philippines, Dominican Republic,⁵¹ Indonesia, Sierra Leone, Djibouti, Senegal, and Mali. One example is the Listahanan in the Philippines (aka the “National Household Targeting System for Poverty Reduction, NTHS-PR). It was originally designed to support intake and registration for the Pantawid Pamilia CCT Program through a pilot registration wave covering just 7,000 households in 2007. As the coverage, capacity, quality and credibility of the system improved, numerous other programs started to use it for registration and eligibility determination. Nowadays, the Listahanan is being used by 52 programs from many government agencies (including several large programs, such as the Pantawid CCT, the social pension, subsidized health insurance, and so forth), as well as by local governments and other institutions. The system still relies on en masse registration, however, and a nationwide census sweep was recently carried out in 2015 to update information in the Listahanan via en-masse data collection and covering 75% of the population. A key question facing these

⁵¹ In the Dominican Republic, in between census sweeps, SIUBEN does collect some on-demand information from potential beneficiaries (sometimes through smaller sweeps or on-demand in the regional offices, which are few). Nevertheless, if eligible, these applicants may not enter programs until next round of program registration is open, which depends on budget availability. So the SIUBEN information is updated usually every 4-5 years, but for a small percentage it is updated a bit more frequently.

relatively long-standing Integrated Social Registry systems is: can they build capacity to shift to dynamic inclusion systems? Will they continue to rely on infrequent nationwide census-survey sweeps - or will they start building capabilities for dynamic inclusion that permit people to register and update their information at any time? One key stumbling block seems to be a lack of a permanent network for citizen interface at the local level, either due to inadequate capacity for local service windows that can handle intake, registration and updating of information – or insufficient inter-governmental coordination to partner with local governments to build such capabilities. Yet there could be significant advantages to building such capacities, in addition to the desirable goal of building dynamic inclusion systems, as discussed in Chapter 3.

- ***Integrated and starting to shift to Dynamic with a combination of en masse and on demand registration.*** Social Registries in some countries expanded to serve multiple programs, and are just starting to move towards on demand applications (moving first up the vertical axis and then starting to move along the horizontal axis of Figure 12). One example is Colombia’s SISBEN,⁵² which has long operated as an Integrated Social Registry (serving many programs), but only recently started allowing for on-demand applications to allow for registration and inclusion in between *en masse* registration waves. SISBEN has been in place since 1993 to identify beneficiaries for the health subsidy program. As the Social Protection System evolved, the Government took a policy decision to formally designate the SISBEN as the Social Registry for multiple social programs, including large programs beyond social assistance, such as subsidized health insurance and others (see Table 2 above and Annex 1).⁵³ The capacity of information systems of SISBEN was strengthened to build some degree of interoperability with other information systems. Nowadays, SISBEN serves more than 8 institutions and 31 programs, with population coverage of 73%. The system has continued to rely on *en masse* registration waves conducted every five years throughout the nation. The most recent wave was carried out in 2010-11, and another is planned for 2017-18. More recently, SISBEN has introduced on-demand applications, which are received by municipal offices who transmit the information to SISBEN. According to estimates in 2016, approximately three quarters of those registered in SISBEN have not had their full information updated since the last registration wave in 2011, but about a quarter have updated or registered via on-demand procedures at municipal offices. Similarly, Pakistan is just starting to pilot on-demand applications on a small scale, although the vast majority of households in the NSER will be registered or updated via the on-going *en masse* registration wave.
- ***Dynamic first, then Integrated.*** In contrast, Brazil’s Cadastro Unico (*Cadúnico*) took a different trajectory, first building capabilities for dynamic inclusion before shifting to common use by multiple programs as an Integrated Social Registry (moving along the horizontal axis of Figure 12 before moving up the vertical axis). Indeed, Brazil invested significantly to build the *Cadúnico* as a credible system for the dynamic inclusion of low income families to support the expansion of the Bolsa Familia Program before moving towards use of the *Cadúnico* as an “integrated gateway” for multiple programs. In terms of the basic timeline, after a one-time nationwide “census sweep” in 2005-06, the *Cadúnico* has operated with on-demand dynamic registration capabilities since 2007, whereas the move towards a more “integrated gateway” with multi-program use of the *Cadúnico* came later, starting in 2011 under the *Brasil Sem Miséria* integrated social policy strategy (Box 14). In this system, anyone who wants to register into the system, or update their information to reflect changing circumstances, may do so at any time (with no guarantee of any benefits). Additionally, all applicants are instructed to go to local offices every two years to update their information (or lose eligibility for any benefits or services covered by the system). Similarly, Georgia TSA Registry has developed strong “front-office” functions via its Single Window Offices that allow for on-demand applications that provide potential access to numerous benefits and services (see Box 15).

⁵² Nowadays SISBEN stands for Sistema de Identificación de Potenciales Beneficiarios para Programas Sociales. Originally, in 1995, SISBEN was the acronym for “Sistema de Selección de Beneficiarios”.

⁵³ This involved enhancing institutional dialogue among the Department of Statistics and Public Policy (DEPP), The National Planning Department (DNP) that formulates overall policy and is in charge of SISBEN, Social Ministries, and the Ministry of Finance, as well as expanding coverage and creating new programs.

- **Integrated and Dynamic.** Some systems were developed with capabilities for both multi-program use (Integrated Social Registries) and dynamic on-demand access. Examples include Macedonia CBMIS, Montenegro’s SWIS, Mauritius SRM, Mexico’s SIFODE, and Turkey’s ISAS. Chile’s current RSH was also launched as both an integrated and dynamic system, though it builds on decades of systems evolution. The examples of Chile’s RSH and Turkey’s ISAS are discussed in more detail in Box 16 of Section 5.C below.

**Box 14 – The Trajectory of Brazil’s Cadastro Unico:
Dynamic Inclusion before Multi-Program Use as an Integrated Social Registry**

Brazil invested significantly to build the *Cadúnico* as a credible system for the dynamic inclusion of low income families to support the expansion of the Bolsa Familia Program before moving towards use of the *Cadúnico* as an “integrated gateway” for multiple programs. The development of the *Cadúnico* took place over several phases:

- **Initial creation: 2003-04.** The *Cadúnico* started off as a merger of pre-existing parallel social registries for four pre-reform programs (*Bolsa Escola*, *Bolsa Alimentacao*, *Cartao Alimentacao*, and *Auxilio Gas*), which were all consolidated into the Bolsa Familia Program in 2003.
- **Nationwide Census Sweep: 2005-06.** A one-time nationwide updating of the current beneficiaries of the four programs was carried out in 2005-06 because the information contained in those pre-reform registries was significantly out-of-date.
- **Dynamic Inclusion System: 2007 and beyond.** As Brazil was carrying out the nationwide census sweep, it started investing in building capacity for a continuous, on-demand dynamic inclusion system. These included actions on the “trilogy” of key systems for: institutional arrangements, citizen interface, and information technology capabilities. Specifically, key measures included: (a) formalizing inter-governmental arrangements for implementing intake procedures via local governments (including formal agreements, protocols, procedures, monitoring, and performance-based administrative financing subsidies transferred from the federal government to local governments for quality implementation of the *Cadastro Unico* and other functions); (b) strengthening the model for citizen interface via the network of social assistance and social service centers (SUAS/CRAS) in all 5,570 municipalities throughout the country; (c) investing in strengthening the *Cadúnico* information system itself, including redesigning the intake questionnaire, rolling out versions 6.0 and then 7.0 of the *Cadúnico* software application, including eventual online capabilities throughout the country.

All of these investments meant that all registration has been carried out on a continuous on-demand basis since 2007, with legislative reforms in 2011 to formalize the *Cadúnico* as an open dynamic inclusion. Anyone who wants to register into the *Cadúnico* or update their information to reflect changing circumstances may do so at any time (with no guarantee of any benefits). Additionally, all applicants are instructed to go to local offices every two years to update their information (or lose eligibility for any benefits). The number of applicants in the *Cadúnico* itself thus expanded from 5.5 million registered families in 2003 to 27.2 million by 2015 (about 80.6 million registered individuals), representing about 40 percent of the national population). Since 2011, the *Cadúnico* has been used as an integrated gateway for numerous programs, in addition to the *Bolsa Familia* flagship program.

Sources: Lindert et. al. (2007); Mostafa and Safyro (2014); and www.org.br

Box 15 – Georgia’s TSA Registry: Integrated and Dynamic, with an Extensive Network of “Single Window” Offices

Georgia’s TSA Registry operates on an on-demand basis, and continuous access is facilitated by the extensive network of local and regional “Single Window” Offices operated by the Social Services Agency (SSA) throughout the country. These “one-stop shops” provide access to a range of social programs, social worker support, and labor services. Although the registry was first developed to support the “Targeted Social Assistance” (TSA) cash transfer program, it now serves as an integrated gateway for numerous other benefits and services. Citizens can apply any time on-demand at the SSA offices using a common initial application, and then a common home visit questionnaire (Family Declaration).

The TSA Registry covers approximately 1.2 million people (or over 35% of the population), whereas 450,000 people (13% of the population) are households that are enrolled in the TSA Program. Numerous other benefits and services rely on information on potential eligibility from the TSA Registry, including subsidies and higher coverage under the Universal Health Care (UHC) system, social energy tariffs, scholarships, special benefits for poor disabled, transport subsidies, and so forth. Some of these, like energy tariffs and the UHC subsidies, are managed by the central government. Many municipalities and district offices offer numerous other benefits and services that depend on the TSA registry for eligibility purposes.

Two interesting uses of the TSA Social Registry not seen in many other countries include pro bono legal services and foster care. In the case of pro bono legal services, the Social Services Agency (SSA) in the Ministry of Labor, Health and Social Assistance maintains a formal Memorandum of Understanding with the court system that guarantees that court fees would be waived for the poor. In the case of foster care, rather than looking at scores “less than” a certain threshold, one factor that informs the approval of families to provide foster care services is whether their PMT scores are “higher than” a certain threshold, to ensure that needy children would not face situations of economic vulnerability in foster care placement.

Source: SSA/MoLHSA, Lindert (2017)

Table 3 – Overview Typology of Social Registries as Inclusion Systems, with Country Examples (Circa 2015-17)

| | Advantages | Challenges | Key Ingredients | Country Examples |
|------------------------|---|---|--|---|
| Use by Social Programs | <p>Single Program: Social Registry provides access to a single program, usually as part of its end-to-end implementation processes and systems</p> <ul style="list-style-type: none"> • Simpler and efficient when social programs are not yet developed • Allows capacity building at local and central level as program is being implemented • Allows progressive development as system evolves, including for interoperability • Can build system for the specific needs and eligibility criteria of the particular program • Can build Social Registry modules directly into the broader information system for the program, usually as part of its end-to-end implementation processes and systems | <ul style="list-style-type: none"> • These systems are costly to develop – and operate, particularly with the front-line intake and registration processes collecting information from citizens (applicants, registrants). • With separate registries for specific programs, each program must bear entire cost of systems development and operation • With separate registries for specific programs, citizens must apply / register for each program separately, and are typically required to provide their documentation repeatedly. High “time-cost-visits” burden for citizens | <p>Basic building blocks for needed for Social Registries (see Assessment Tool), including:</p> <ul style="list-style-type: none"> • Financing for social registry for social registry development, operation, and maintenance – for <i>both</i> the front-office (citizen interface) and the back-office systems • Institutional and legal foundations • Arrangements and capacity for citizen interface for intake, registration, updating, grievances and appeals) • Mapping of core “business processes” along delivery chain (Figure 2 and Annex 2); End-to-End planning for implementation of SR functions • Questionnaire / application form, including consent form for use of information • Interview process guidelines, training & manuals • Information systems capabilities: data & information, software, database management, ICT infrastructure, information security tools and privacy standards | <p>Azerbaijan- VENTAS; Yemen SWF</p> |
| | <p>Multiple Programs: Integrated Social Registry provides access to numerous programs (even beyond SP)</p> <ul style="list-style-type: none"> • More holistic approach to social policy, including for poor and vulnerable families • Efficiency for citizens, user programs, and social policy overall • Transparency gains • Accuracy of information | <ul style="list-style-type: none"> • If system is very fragmented, efforts for integration may outweigh gains in efficiency • Can be challenging to harmonize eligibility concepts across programs and obtain inter-agency cooperation | <ul style="list-style-type: none"> • Basic Building Blocks for Social Registries (see above and Assessment Tool) plus: • Common application form / questionnaire for all user programs • Harmonized definition of all variables to be used in determination of eligibility | <p>Indonesia UDB; Philippines Listhanan; Pakistan NSER; Colombia SISBEN; Dominican Rep-SIUBEN; Brazil CadUnico; Georgia TSA; Montenegro SWIS; Macedonia CBMIS; Turkey ISAS; Chile RSH/SIIS; Mauritius SRM; Mexico SIFODE; China Dibao Registry*</p> |
| Gateway for Inclusion | <p>En Masse Registration: Registration open on a periodic basis, such as via en masse registration</p> <ul style="list-style-type: none"> • May be more feasible for countries with low front-office capacity or that are data-constrained • May be useful for countries “starting from scratch” in such contexts • Efficient when local infrastructure is not developed, particularly when | <ul style="list-style-type: none"> • People can be shut out of registering for many years (exclusion concerns); • Missing opportunity to invest or tie-in to a “whole-of-government” infrastructure; • High absolute cost of carrying out <i>en masse</i> registration, which could be otherwise invested in front-office capacity for on-demand approaches | <ul style="list-style-type: none"> • Significant funding every 3-5 years for the census-sweep (costly) • Have to hire and train interviewers and enumerators for field work every few years (or contract stats agency) | <p>Mali RSU; Djibouti RSU; Indonesia UDB; Philippines Listhanan; Pakistan NSER; China RPHR; Colombia SISBEN; Dominican Republic SIUBEN;</p> |

| | | | | |
|---|---|---|---|---|
| waves (census sweeps) every 3-5 years | <p>country lacks network for citizen interface</p> <ul style="list-style-type: none"> • Efficient in areas where poverty rates are high or in homogeneous areas • Can improve chances of reaching the poorest who may be less informed for on-demand methods • Particularly suitable when need to start program / registry quickly and lack initial data | <ul style="list-style-type: none"> • Political costs of large % of turnover on eligibility every few years | | Sierra Leone SPRINT; Senegal RNU; Yemen SWF |
| <p>On Demand: People can register at any time (via local offices, service kiosks, online, field teams, etc.)</p> | <ul style="list-style-type: none"> • Allows for dynamic inclusion • Investing funds in more permanent capacity development on front-lines rather than incurring large outlays every few years for mobile teams | <ul style="list-style-type: none"> • May not be appropriate with very small, restricted programs – or in countries with low capacity; • Political economy of vertical collaboration requirements – center doesn't trust the local due to patronage and money politics | <ul style="list-style-type: none"> • Requires extensive network for citizen interface (front-office), either in-person or online • Flexible budgets for user programs | Georgia TSA; Brazil Cadastro Unico; Montenegro SWIS; Turkey ISAS; Chile RSH/SIIS; Azerbaijan VENTAS; Macedonia CBMIS; Mauritius SRM; Mexico SIFODE; China Dibao Registry;* Colombia SISBEN* |

B. Diverse Typologies of Social Registries as Information Systems

There is considerable variation in the architecture of Social Registries as *information systems*. The context and starting points matter, in terms of systems capacities, institutional structures, and the broader digital governance context. Moreover, these systems evolve over time, sometimes with small iterative improvements or adaptations, in other cases with “big bang” systems overhauls. As such, there is no single blueprint for how Social Registries should be structured or managed. This diversity spans a number of aspects, and Table 4 at the end of this section summarizes the typology of countries in our sample according to these features:

- **Structure of data management: centralized vs. federated (virtual) systems**
- **Degree and use of interoperability and data integration with other information systems**

Structure of data management: centralized vs. virtual

As discussed below, the structure of data management varies significantly across countries, depending on the choice of data integration and the interoperability framework for whole-of-government. A number of countries that are setting out on the path to building a Social Registry contemplate whether they should build one comprehensive *centralized social registry* or if they can leverage existing decentralized databases to build a *virtual or social registry*. (See Chapter 4 above)

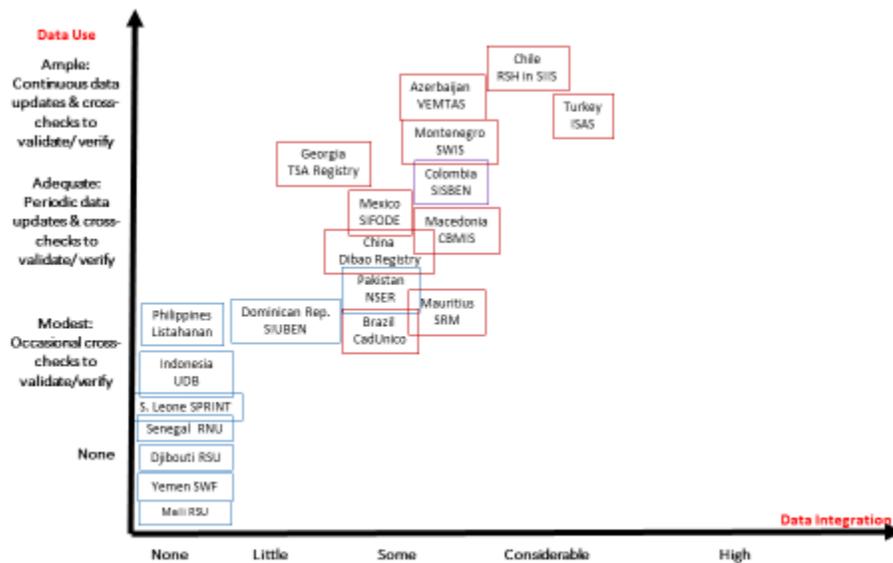
One group of countries, many of which are at an early stage of developing their information systems capabilities for a whole-of-government approach, may prefer to build a ‘self-contained’ database to manage Social Registry data. Many of these countries have a weak interoperability framework among administrative information systems. Self-contained databases usually store and manage data sourced through an *en masse* registration (census sweep), for instance Indonesia’s UDB and Philippines’ Listahanan. Self-contained databases, may also store additional data and updates sourced through point-to-point integration among agencies.

A second group of countries that have a traditional interoperability and whole-of-government approach tend to develop a Centralized Social Registry. They build a data warehouse that stores information from various administrative information systems sources, including beneficiary registries. These are based on traditional data warehouse methods and they use ETL to extract, transform and load bulk data from administrative information systems of the various agencies at regular intervals to provide analytics, and to answer the requests for data coming from the authorities and from research institutions more effectively, quickly and cheaply. Changes in data are uploaded periodically (daily, weekly, monthly etc.), based on an agreed schedule with various agencies. Changes are not constantly updated in real-time as this would affect performance and latency. Such data warehouses work well in countries that have mature information systems for tax, education, health etc. Examples of such approaches include Chile Solidario and Turkey’s ISAS or Bütünleşik. This approach tends to be more intensive in terms of time, cost and effort, as data needs to be constantly kept up-to-date with the source data, with the added burden of protecting the security and confidentiality of all the data that has been collected.

A third group of countries that have an agile and highly interoperable framework for whole-of-government are developing Virtual Social Registries using data virtualization technologies. This approach is being used by countries that require agility, when a more centralized data management model is not feasible for various reasons such as time, total cost of ownership, and challenges with collecting and centralizing bulk data from other government agencies. A relevant example of a virtual data management approach is Belgium’s Crossroads Bank for Social Security (CBSS). Countries such as Jordan and Egypt are currently experimenting with this approach.

Social Registries differ significantly according to their degree and use of interoperability with other information systems and influence the structure of data management, as described above. The spectrum ranges from “self-contained” systems that collect and manage all data directly, with little to no interaction with other information systems, to “centralized” systems with limited, some or considerable interoperability with other systems, to “virtual” systems which are highly interoperable and allow for real-time data exchange and virtualization with numerous administrative systems (Figure 13).

Figure 13 – Spectrum of Interoperability of Social Registries with Other Information Systems, circa 2015-16



Source: Authors’ compilation from country information. Note that these classifications represent an assessment of Social Registries in each country based on information available as of 2015-17

Social Registries that are developed entirely as “self-contained” systems (or parallel “silos”), usually imply little to no interoperability with other systems. All information is sourced through their own data collection processes for intake and registration, and managed within their own information systems. These self-contained systems are usually seen in countries where broader administrative information systems are weak, there is limited capacity to support sophisticated information systems, may not be underpinned by a national digital governance strategy, and where Social Registries (and social assistance programs for that matter) are relatively younger. Because there are little to no integrations built between a self-contained system and other administrative sources of data, it proves hard to do data cross-checks to verify and validate data for errors and to keep data up-to-date for eligibility determination.

- **Yemen SWF, Djibouti RSU, Mali RSU and Senegal RNU** have no interoperability with other systems yet.
- **Sierra Leone SPRINT** has little interoperability using the household ID, for example with Anti-Corruption Commission System (which receives and filters all corruption and administrative grievances)
- **Indonesia UDB** has little to no automatic data exchange with other administrative systems.
- **Philippines Listahanan** has no interoperability with other systems yet, but the government is working more broadly on an e-government platform.

Centralized Social Registries with little or some interoperability pull data from other information systems, for example to run “cross-checks” or to push data to user programs. Such implementations are seen in countries that have some existing capacity and are strengthening their ability to support more advanced information systems implementations, including an interoperability framework for data integration with other agencies. Data integrations are usually point-to-point and may be database links or private APIs. Cross-checks with other information systems are on a periodic basis (for verification), or through infrequent “batch matches” (for data audits and quality control).

- **Dominican Republic SIUBEN** has limited interoperability with user programs, but they are developing an interoperability framework and data integration capabilities as of 2017.
- **Brazil Cadastro Unico**, for example, runs periodic cross-checks with other information systems, such as the labor information system (RAIS), the pension system, and the tax system.
- **Pakistan NSER** links to NADRA’s ID system for authentication of individuals.
- **China Dibao Registry** has some interoperability with cross checks and some data exchange with other systems.
- **Georgia TSA Registry** has some interoperability with other administrative systems for data exchange (tax revenue system, land cadaster, public property cadaster, utilities agency, vehicles registry in Ministry of Internal Affairs), as well as with user programs and municipalities.
- **Macedonia CBMIS** has some interoperability via web-services with the Office of Management of Registries of births, marriages, deaths; National Employment Agency for monthly income, employment status; Agency for Real Estate Cadastre for property; Pension and Disability Insurance Fund. Macedonia also has an on-going project to enhance data integration with with numerous other systems.
- **Mauritius SRM** has some interoperability, and links to the Mauritius National Identity System (MNIS) for authentication, as well as with other systems run by MSS, including the National Pensions Fund (NPF) for income verification and with the Benefits System.
- **Mexico SIFODE** has some interoperability with the Civil Registry and RENAPO (National ID), but they have an ongoing project to develop an Integrated SP Information System, or “SISI”.
- **Azerbaijan VEMTAS** has some interoperability with other administrative systems.
- **Colombia SISBEN** has some interoperability and is linked to the Integrated System of Health Insurance (SIIS), Integrated Contribution System of Social Security (PILA), Information System for Operation of Subsidized Health Insurance (SISSUB), Information System for Regulation of Medicines, and more. Colombia’s SISBEN cross-checks data on a monthly basis with (i) the Social Security database (*Base Unica de Afiliados del Fondo de Seguridad y Garantia del Sistema General de Seguridad Social*), that receives information from the Registro Civil to update deaths and (ii) with the database of the Pension and “Parafiscales” unit of the Ministry of Finance to identify individuals whose salary is greater than five times the minimum monthly wage.
- **Montenegro SWIS** has some automated and semi-automated interoperability with numerous administrative systems, including the population registry (for ID), tax system (public revenue office), pensions, health system, employment, Ministry of Interior (vehicles), real estate cadaster (property), etc.

Centralized Social Registries that have considerable interoperability have developed sophisticated methods of data integration, such as using ETL (extract, transform, load) for bulk data transfer on a periodic basis, with real-time links to transactional data updates as well as a ‘flush and refill’ to capture most current data updates from other administrative systems at the national and local level. There may also be some private APIs and database links to connect point-to-point with some agencies. Agencies with added capacity use an Enterprise Service Bus (ESB) to exchange transactional data that changes frequently. These data integration approaches are usually seen in countries that have invested in in-house capacity, have strengthened their ability to support the implementation of more sophisticated information systems, and have developed an interoperability framework for government agencies. Often, these Social Registries operate within the context of integrated

social protection information systems, with active links to beneficiary registries, and within numerous other administrative systems. Examples include Chile's Social Registry of Households, which operates within the Integrated System for Social Information (SIIS), and Turkey's Integrated Social Assistance System (ISAS) are two such examples (see Box 16).

- **Turkey ISAS** has a considerable degree of interoperability with other systems. ISAS is integrated with 22 institutions online via web services, and also uses a data warehouse for bulk transfer of data through ETL. The National ID number and PIN provide two-factor authentication and the key for linking across these systems. Example information systems that are linked to ISAS include beneficiary registries of various programs, population and citizenship registry, household registry, social security, revenues administration, vehicles, land registry, farmer registration, health control information, education (school attendance, grade transition, etc.), employment agency, etc.
- **Chile RSH** also has a considerable degree of interoperability with other systems. RSH is part of Integrated Social Information System (SIIS), which includes the RSH + an Integrated Beneficiary Registry (RIB); data exchange via national ID with numerous other info systems (taxes, social security, unemployment insurance, pensions, health insurance, educational status, property ownership, vehicles ownership, etc.), as well as with the geographical information system.

Box 16: Considerable Interoperability and Integrated Social Protection Information Systems: Chile & Turkey

- **Chile's Social Registry of Households (RSH)** is one example of a highly interoperable system that combines self-reported information from citizens and real-time data exchange with numerous other administrative systems. Chile first pioneered the development of a social registration and eligibility system (Ficha CAS) in the early 1980s, with the Ficha CAS proxy-means testing system serving multiple social programs early on in its inception. The RSH built on that early experience with the Ficha CAS system and was developed in response to the concrete changes and operational needs of the Chile Solidario initiative, which links extreme poor families to numerous benefits and services with active social worker intermediation and outreach. The design of a national system for social protection addressed the lack of communication among information systems managed by different agencies for numerous programs serving the Chile Solidario initiative. The 2004 law creating the Chile Solidario System included a mandate for the creation of a Social Information Registry (RIS), combining both the Household Social Registry (RSH) with an Integrated Beneficiary Registry (RIB) that links numerous program beneficiary registries. The RSH now covers about 75 percent of the Chilean population and serves over 80 programs. Citizen interface is permanent, integrated, and dynamic: citizens can apply for over 80 social programs, update their information, and access their information online or through local offices. Self-reported information includes: family composition, housing conditions, education, health, occupation and income. Data drawn from other administrative systems include information on: taxes, social security contributions, unemployment insurance, pensions, health insurance, education, and property and vehicle ownership, and so forth. Interoperability is facilitated by a unique National ID. The RSH operates within the context of an Integrated System for Social Information (SIIS), with real-time two-way links to an Integrated Beneficiary Registry that permits coordination of both the demand for social programs (via the Social Registry) and the supply of programs (via the Integrated Beneficiary Registry).
- **Turkey's Integrated Social Assistance System (ISAS)** also maintains real-time interoperability with numerous information systems (population registry, social security, education and health, land registry, revenue administration, agriculture, etc.). This capacity was developed to consolidate parallel social registries that were largely paper-based systems and to reduce the amount of time needed to collect appropriate paper documents and complete the processing of applications. With the improved technology, the Integrated Social Assistance Service System (ISAS), Bütünlesik, was developed within the context of a broader digital governance strategy, allowing program administrators to query in real time and online a large number of government databases to verify the status of households applying for social assistance. At present, the system gives online query access to 22 institutions and 28 databases through a web service system and is used by numerous social programs. For all social assistance programs, the initial application involves presentation of the applicants' National ID numbers and signing of a consent form to allow institutions to review their information. A socio-economic profile is generated in ISAS by linking datasets from various institutions to the citizen's unique national ID number. The profile is then assessed for completeness of information, inconsistencies, and potential eligibility via data exchange with numerous information systems (population registry, social security, education and health, land registry, revenues administration, agriculture, etc.). Subsequently, a social worker carries out a home visit to collect and verify information of households and their member using a standardized questionnaire (with approximately 50 questions). At present, this home visit questionnaire is still paper-based, but there are plans to move to a digital interface. Once information from the home visit is digitalized, the Social Registry is available for use by 17 programs (as of 2017), including various types of income support (such as CCT, old age and disability pension), Universal Health Insurance subsidies, scholarships and other educational supports, and so forth (see Annex 1)

A virtualized data management model for Social Registries provides the advantage of agility for data integration and high degree of interoperability. Centralized and intensive data integration methods prove tortuous when there are a huge number of data sources as well as attributes that must be sourced, and frequent updates need to be managed near real-time, to improve the quality of data and therefore eligibility determination. This approach is seen in countries that have strong in-house capacity, and ability to support sophisticated information systems implementations, and have well developed integration and interoperability frameworks. Data from various administrative sources is not physically moved to the agency that is the custodian of the social registry, but is virtualized for the purpose of eligibility determination. This approach is useful in countries where a number of institutions may be unwilling to participate in creating a large centralized store of

data for the social registry, on account of data protection and security, as well as the risk of data becoming quickly outdated when it is replicated in a centralized data store. The data virtualization approach offers considerable improvements in updates and cross-checks to validate and verify data, with real-time and dynamic decision support. From the sample set of countries, there are no examples as yet of this approach.

Table 4 – Overview Typology of Social Registries as Information Systems, with Country Examples (Circa 2015-17)

| | Advantages | Challenges & Characteristics | Key ingredients | Country Examples |
|--|--|---|--|--|
| Self-Contained Data Stores (Little to no Interoperability) | <ul style="list-style-type: none"> • Feasible for countries with limited capacity to support sophisticated information systems implementations • Useful for countries “starting from scratch” with little to no existing interoperability or links with other administrative sources of data. | <p><u>Challenges:</u></p> <ul style="list-style-type: none"> • Data is stale and is not updated. • Because there are little to no integrations built between a self-contained system and other administrative sources of data, it proves hard to verify and validate data for errors and to keep data up-to-date for eligibility determination. • Any integrations need to cross a firewall to access systems from external agencies. • The little integrations that are built in are point-to-point, i.e., connecting directly to other administrative systems using a DB link or FTP (and are more likely over a VPN connection) and therefore results in a spaghetti-like mess of connections to other agencies over the medium to long term that become hard to manage. | <ul style="list-style-type: none"> • Secure financing to invest in systems • Make a decision on integration/interoperability framework • Make a decision on structure of data management – centralized or virtualized (countries without legacy systems have opportunity to leapfrog to virtualized) • Define data sharing protocols across agencies • Analyze political, legal, organizational, semantic and technical context to develop an interoperability framework • Invest in and develop strong in-house IT capacity • Determine institutional arrangements for managing the social registry | <ul style="list-style-type: none"> • Yemen SWF • Djibouti RSU • Mali RSU • Senegal RNU • Sierra Leone SPRINT • Indonesia UDB • Philippines Listahanan |
| Centralized Data Stores (with Little-to-Some interoperability) | <ul style="list-style-type: none"> • Feasible for countries that have some existing capacity and are improving their ability to support more advanced information systems implementations • Useful for countries that are starting to consider, design and develop interoperability and integration frameworks with other government agencies • Some improvements in updating data for validation, verification and cross-checks with other agencies. | <p><u>Challenges:</u></p> <ul style="list-style-type: none"> • Data is somewhat stale and not all of it is updated and all the time. • Integrations are point-to-point and usually developed using DB links between databases of the host agency and other external agencies, or even as private APIs. <p><u>Characteristics:</u></p> <ul style="list-style-type: none"> • Use a National unique ID or common set of identifiers • Structure of data management is usually a relational database management system (RDBMS). • Integrations need to cross a firewall and are more likely to be done over a VPN network. | <ul style="list-style-type: none"> • Secure financing to invest in systems • Make a decision on integration/interoperability framework • Make a decision on structure of data management – centralized or virtualized (countries without legacy systems have opportunity to leapfrog to virtualized) • Define data sharing protocols across agencies • Analyze political, legal, organizational, semantic and technical context to develop an interoperability framework • Further develop in-house IT capacity • If the agency has built sufficient capacity, assist other administrative agencies with knowledge and advice to help invest in systems that are architecturally and technically sound. • Strengthen institutional arrangements for managing the social registry | <ul style="list-style-type: none"> • Dominican Republic SISBEN • Brazil CadUnico • Pakistan NSER • China RPHR • Macedonia CBMIS • Georgia TSA • Mexico SIFODE • Mauritius SRM • Azerbaijan VEMTAS • Colombia SISBEN • Montenegro SWIS |

| | | | | |
|--|--|---|--|--|
| | <ul style="list-style-type: none"> Some contribution to efficiency gains | | | |
| Centralized Data Stores (with Considerable Interoperability) | <ul style="list-style-type: none"> Feasible for countries that have built in-house capacity and have strengthened their ability to support more sophisticated information systems implementations Useful for countries that are have designed and developed interoperability and integration frameworks with other government agencies Improvements in updating data for validation, verification and cross-checks with other agencies. Contributes to efficiency gains | <p><u>Challenges:</u></p> <ul style="list-style-type: none"> Data is somewhat updated on a periodic schedule but not all required data as some institutions may not be willing to share their data. Other institutions may have data that is of dubious quality as their information systems capacities are not on par. Integrations need to cross a firewall and are more likely to be done over a VPN network. <p><u>Characteristics:</u></p> <ul style="list-style-type: none"> Integrations may be bulk transfers of data through an ETL tool that is set up to load, flush and refresh information on an agreed and periodic basis. There may be private APIs to connect point-to-point with some agencies. Agencies with more capacity use an Enterprise Service Bus to exchange real-time and asynchronous transactional data. Structure of data management may be an integrated data store, comprising a data warehouse/data marts, operational databases, master data management etc. Some of the more advanced agencies have in-memory databases to greatly improve performance and speed. Other methods of data security may be used such as SSL handshake, whitelisting, etc. | <ul style="list-style-type: none"> Ensure financing to maintain and operate systems, develop new capacity Strengthen integration/interoperability framework and participate in whole-of-government data integration discussions. Review and strengthen data sharing protocols across agencies, including interoperability framework (political, legal, organizational, semantic and technical context) Contribute to setting data quality standards for information in linked systems Assess structure of data management and make decision on investing in data virtualization to improve data integration and interoperability Invest in training, benchmark salaries to market to maintain strong in-house IT capacity If the agency has built sufficient capacity, assist other administrative agencies with knowledge and advice to help invest in systems that are architecturally and technically sound. Strengthen institutional arrangements for managing the social registry | <ul style="list-style-type: none"> Turkey ISAS Chile RSH |

- Feasible for countries that have built strong in-house capacity and ability to support sophisticated information systems implementations
- Useful for countries that are have designed and developed interoperability and integration frameworks with other government agencies
- Useful for countries where some institutions are unwilling to provide their data to create a centralized Social Registry, as this poses a data protection and security risk, let alone the risk of out-of-date data being centralized.
- Considerable improvements in updating data for validation, verification and cross-checks with other agencies.
- Contributes to efficiency gains
- Real-time and dynamic decision support.

Challenges:

- Requires strong in-house IT capacity
- Characteristics:
- Real-time and asynchronous transaction data is updated through data virtualization technology with other agencies. However, if other institutions have data that is of dubious quality as their information systems capacities are not on par, it will affect the overall quality of data.
 - In some cases, the data virtualization approach may complement bulk transfers done through ETL which will load, flush and refresh information on an agreed and periodic basis. There may be an API Gateway to connect to some external agencies. There may also be an Enterprise Service Bus to exchange real-time and asynchronous transactional data.
 - Structure of data management may be an integrated data store, comprising a data warehouse/data marts, operational databases, master data management etc. Some of the more advanced agencies have in-memory databases to greatly improve performance and speed.
 - A number of different methods of data security may be used such as SSL handshake, whitelisting, VPN, etc.

- Ensure financing to maintain and operate systems, develop new capacity
- Strengthen integration/interoperability framework and participate in whole-of-government data integration discussions.
- Review and strengthen data sharing protocols across agencies, including interoperability framework (political, legal, organizational, semantic and technical context)
- Contribute to setting data quality standards for information in linked systems
- Review and strengthen structure of data management to improve data integration and interoperability
- Invest in training, benchmark salaries to market to maintain strong in-house IT capacity
- If the agency has built sufficient capacity, assist other administrative agencies with knowledge and advice to help invest in systems that are architecturally and technically sound.

- Belgium’s Crossroads Bank for Social Security (CBSS)

Chapter 6: The Cost of Social Registries

Estimating and comparing the costs of Social Registries is not straightforward for several reasons.⁵⁴ First, there are many different types of costs. One type of costs are the private costs to individuals and households associated with participating in intake and registration processes. Another type is administrative costs both at the local “front end” and in the “back office, and covering, both physical and human capital cost relating to staff salaries, method and frequency of data collection and diversity in institutional arrangements. Second, costs of Social Registries are spread out over time, varying significantly, because countries rarely design, build and operate these systems from scratch with a single investment. This Chapter elaborates on some of these points, and provides some examples in Box 17, while noting that cross-country estimates and comparisons of costs is beyond the scope of this paper.

The first set of costs involves *private costs of registrants*. These typically include the time and money invested by citizens to gather required documents, travel to citizen interface points, participate in intake and registration interviews, and so forth. Some countries offer assistance to help individuals (a) obtain free copies of documents or have documents scanned at registration site instead of bringing own copies; and (b) receive free lost documents replacement, which implies that administrators pay direct the authorities in charge of delivering the documents in form of subsidies. And in some instances, countries even include a line in the budget for the Social Registry to cover those expenses (e.g., in Palestine).

The second set of costs involves the administrative cost of outreach, intake and registration. These “front-office” costs vary significantly depending, for example: on the outreach approach that includes communication to foster awareness, and the decision of having a pro-active outreach approach to promote inclusion of the most marginalized and in remote areas; on the interview process and data entry that can be at the household level or at a registration point, and also paper based or electronic that incur in extra costs as digitalization and trainings on the tools; and method and frequency of data collection, e.g., infrequent census sweep approaches vs continuous on-demand approaches. When looking only at the registration method, infrequent *en masse* data collection generally involves large “lump sum” budgets that must be financed entirely within a specific time period. Costs include, inter alia, hiring and training of mobile teams and procurement of necessary materials (including mobile and fixed IT equipment and infrastructure, which can rapidly become dated and unusable for future rounds. While for continuous on-demand approaches, a network of permanent “contact points” for citizen interface, such as trained social workers and having IT equipment in local offices is required. This approach can often take advantage of existing service windows or local municipal offices that provide other functions. Continuous on-demand methods offer the advantage of smoothing the costs and financing of intake, registration, and updating over time – which may be easier to finance as an on-going operating cost rather than in large “lump sums” that must be budgeted for *en masse* data collection waves.

The third set of costs involves the costs of IT systems capabilities (software, database management, IT infrastructure at central and local levels). These “back-office” costs vary significantly across countries. Some factors that come into play include whether Social Registries are developed as “self-contained” silo systems, or whether they operate within a broader “whole-of-government IT strategy” with interoperability or whether it

⁵⁴ A few studies have attempted to estimate costs of Social Registry functions, usually in the context of other program administrative costs. Some examples include: Lindert, Skoufias, and Shapiro (2006), Coady (2000); Caldés, Coady and Maluccio (2006); Tesliuc, Pop, Grosh and Yemtsov (2014), among others.

operates with local arrangements with local servers or only at central level with web connections with a central server.

Other aspects that come into play include institutional arrangements, financing, and whether or not Social Registries serve one or multiple programs. Often, the budget for Integrated Social Registries lies with the host agency. One question that arises is which user programs would bear the costs of Integrated Social Registries that serve multiple programs. In Brazil, for example, the *Cadastro Unico* serves numerous social programs, but the operating budget resides primarily with the Ministry of Social and Agrarian Development (former Ministry of Social Development) and is typically attributed to the flagship *Bolsa Familia* program. To some degree, user programs in other agencies get a “free ride” on administrative costs due to the gains in efficiency that come with multi-program use of the Social Registry. Vertically, another aspect that arises is the financing of local costs for citizen interface. Again, the example of Brazil is useful as the central government passes administrative cost subsidies to municipalities to cover the local costs of citizen interface for intake, registration, and updating.

Another key aspect is the evolution of cost elements of Social Registries over time. Very few Social Registries are planned, budgeted, and financed all in one fell swoop, from start-up to full operation. Rather, as noted throughout the paper, Social Registries evolve over time, and the starting points vary considerably. Technologies and capabilities change, as do the costs of these investments. Besides the aforementioned comments key elements of these costs over time include:

- On-going administrative operating costs, which are necessary to run and use the system, including staff in both central and decentralized offices, activities to keep information system dynamic and up-to-date, and costs of appeals, and management and operation of the data base;
- Systems improvements, including software updates, systems upgrades, training staff on new procedures, and so forth; and
- Evaluation costs, including assessment, monitoring, evaluation, and audits.

Box 17 – Examples of Cost Estimates

Turkey:⁵⁵ Even though Turkey started from a base of extensive administrative information systems and program information systems, the development of the integrated information system represented a substantial investment. The total estimated cost of ISAS development was US\$13.1 million, an amount that is considered reasonable compared to other countries that have developed similar systems. Since the system currently covers about 40 million people, or 10 million households, this represents a system development cost of US\$1.3 per household in the period. Turkey was able to reduce development costs by contracting TUBITAK, a public agency, to develop the system “in house” and provide ongoing maintenance. A breakdown of the costs by type includes: US\$5.3 million for hardware (computers, servers, security systems, and system rooms), and US\$7.8 million for analysis, technical design, and software development. The contract with TUBITAK included ongoing maintenance through 2015, and the IT department of the Ministry of Family and Social Policy provides continued daily maintenance. The cost efficiencies that were generated by ISAS outweigh the costs of developing and operating the system. ISAS has the capability to identify these cost efficiencies, for example: identifying and eliminating 10 percent of assistance benefits that were duplicated, reducing paper costs to the tune of processing 2.3 million *fewer* documents per month, and reducing processing time. With respect to the latter, for the time needed to process applications from registration to enrollment decisions was reduced by 20 percent. Moreover, it is estimated that the system generates a savings of one million full-time equivalent person days per year. Finally, ISAS

⁵⁵ See Ministry of Family and Social Policy (April 2017, and 2017). It is important to note that ISAS is a full integrated social protection information system, including modules for the Social Registry functions to support intake, registration, and determination of eligibility, as well as beneficiary management and payments administration.

estimates overall resource saving of \$39 million *per year* – far higher than the \$13.1 million invested to develop the system.

Colombia: The set-up cost of SISBEN was estimated at around USD 2.25⁵⁶ per family registered in 1995, of which 73% was related to household data collection. In 2001-2002 SISBEN administrators defined the new strategy for SISBEN, the SISBEN II, when a new questionnaire and procedures were defined to be applied nationwide from January 2003. SISBEN II continued using an en masse approach in selected poor areas identified by the cities and municipalities, to be followed by application on-demand for those not included in the initial survey of 1995. Over the SISBEN II cycle for registration, 2003-2006, the estimated cost per family registered was USD 2.3 for a total of 8 million families. Then, SISBEN III registration cycle cost about USD 2.52 per family, including data collection and front/back office investment for improving interoperability. As technology evolved some data collection costs are declining due to use of electronic instruments, the SISBEN IV cycle cost for updating and registering new families, more than 10 million families, dropped to USD 1.27 per family.

Brazil: During the phase of the consolidation of four programs⁵⁷, 2003-2005, into the Bolsa Familia program that formed the initial largest base for the Cadastro Único (*CadÚnico*) the estimated cost per family in the CadÚnico was USD 0.53 per household, because it mainly consisted of having households recertified using a single enrolment form and data entered in a simple system. As the *CadÚnico* matured⁵⁸, becoming the gateway for benefiting from “low income families” social policies during the period 2006-2009, it required more human and physical capital investment increasing the cost per families to USD 2.03. Between 2010-2013 *CadÚnico* version 7 introduced online synchronization with the federal center and other systems as pensions systems, increasing the cost per family to USD 2.06 due to the physical infrastructure needed.

Chapter 7: Assessment Tool

This Chapter presents an overview of the “nuts and bolts” of Social Registries, indicating core “questions” one would ask in assessing Social Registries (Assessment Tool). This review of core nuts and bolts and Assessment Tool aims to help policymakers and technicians to assess and identify the quality of the current Social Registry inclusion systems for social programs channeled to poor and vulnerable groups. It allows countries to assess, build, or strengthen their Social Registries by providing an overview of key elements of these systems, along with “checklist” style questions on each of these elements. It can help guide a “gap analysis,” facilitating an assessment of Social Registry in its current state (status quo) and development of a “Road Map” of what would be needed to strengthen it towards a desired vision for the future. This “gap analysis” can also benefit from the experiences and lessons learned from a range of typologies and trajectories of Social Registries in other countries (See Annex 1 for a summary inventory and characterization of Social Registries in a sample of countries). For countries that are “starting from scratch,” the Assessment Tool provides an overview of key building blocks that should be considered in the development of these systems.

Involvement of various stakeholders would be important in carrying out the assessment. These include *inter alia*: (a) central agency stakeholders, including the Social Registry manager, policy maker, operators and IT staff; (b) frontline staff involved in the intake & registration processes (e.g., at local offices, citizen service centers, mobile teams, etc.); (c) stakeholders from user programs that use the social registry; and (d) citizens, applicants, or those already registered.

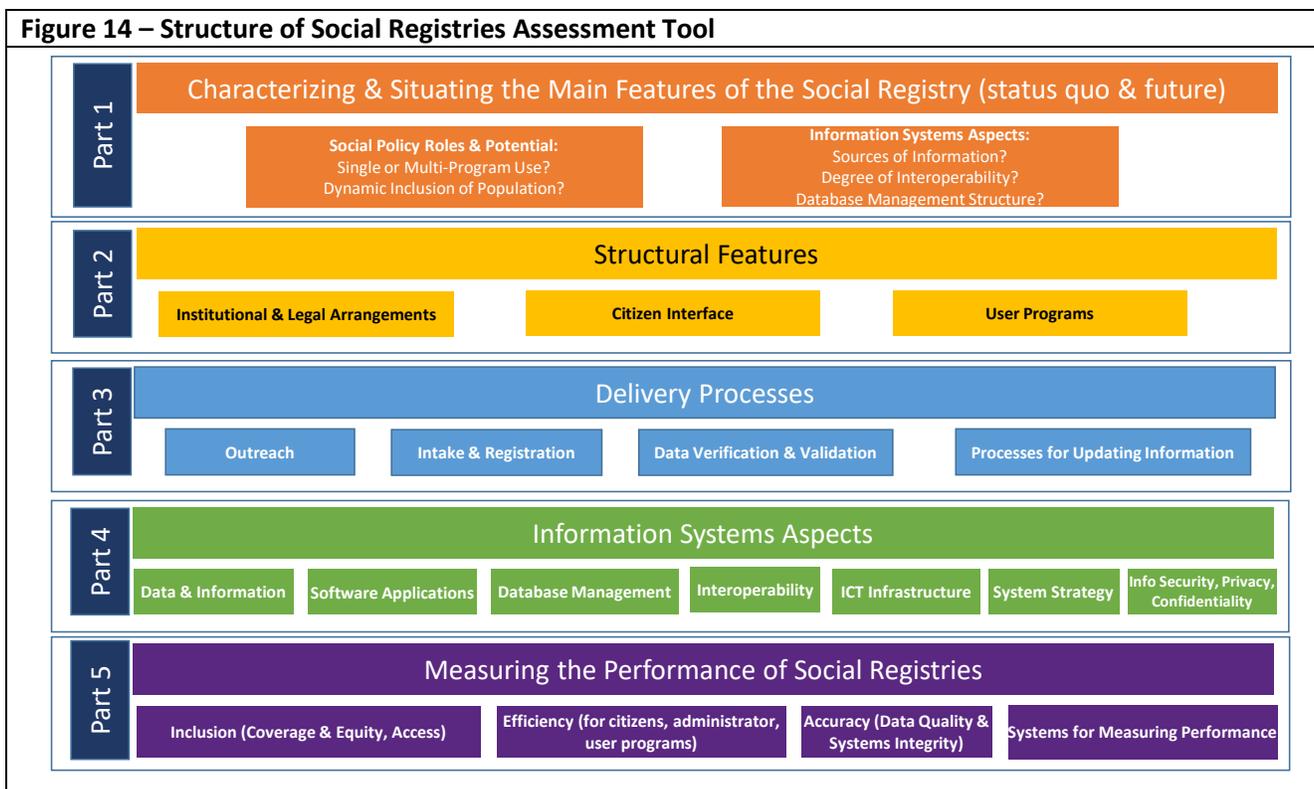
⁵⁶ See Castaneada (2005)

⁵⁷ The Bolsa Familia program resulted from the consolidation of Bolsa Escola, Bolsa Alimentação, Cartão Alimentação and Vale- Gás.

⁵⁸ See Baddini Curralero (2016)

The Assessment Tool is structured around five parts: (a) guiding questions to help characterize the current state of the Social Registry, which can help situate it with respect to other countries with similar (or desired) systems in order to benefit from lessons learned; (b) structural aspects of the Social Registry; (c) process aspects; (d) information systems aspects; and (e) performance of social registries (Figure 14).

Given the wide diversity of Social Registries as inclusion and information systems, the checklist of “Assessment Tool” questions is not meant to be exhaustive – and not all questions will be relevant for all systems and contexts. Moreover, it is not intended to be prescriptive, nor is it advocating for any specific model or blueprint for Social Registries. Any diagnostics or recommendations that emerge from its application will be country specific.



Part 1 - Characterizing & Situating the Main Features of the Social Registry

Situating the Social Registry in Country Context & Social Protection Landscape (Current and Envisaged)

The core characteristics of Social Registries evolve to reflect the country context and landscape of social protection policies and programs (existing and envisaged). The design and implementation of social protection and social policy more broadly are associated with particular institutional arrangements – and those will influence different aspects of the Social Registry. Particularly relevant is to what extent a country is trying to improve the efficiency of the Social Safety Net (or SPL landscape) by promoting a more systemic approach. In many countries, a Social Registry is viewed as an important instrument that supports this more systemic approach. Also important are the coordination mechanisms and bodies that exist in a country. The role and development of a Social Registry also depends on the characteristics of the intended populations for user programs or potential user programs, as well as the eligibility criteria and concepts related to measuring socio-economic needs and conditions. As such, situating the Social Registry in this broader country context and SPL landscape (current and envisaged) is useful:

1. Is there a national policy for Social Protection and Labor?
2. What government entities are responsible for administering social protection policy?
3. Is there a coordination body or steering committee involving different government agencies and stakeholders that focuses on improving coordination of various SPL and social programs more broadly?
4. What are the broad characteristics of the poor, vulnerable and other intended populations?
5. What are the main social programs to address the poor, vulnerable and other intended populations?
6. What are the eligibility concepts and criteria for these programs?

Characterizing the Social Registry in Terms of Core Features (Current and Envisaged)

At the outset, it is also useful to broadly characterize the Social Registry in terms of its social policy roles and system architecture. This can help depict the Social Registry in terms of the “status quo” and the “vision for the future,” and thus facilitate a “gap analysis” and road map for strengthening the registry towards that desired vision. It can also help situate the Social Registry in terms of the typologies and trajectories of other countries, so as to facilitate learning from relevant international experience. Tables 3 and 4 above provides an overview of typologies of Social Registries according to various characteristics, and Annex 1 provides a summary inventory of Social Registries in our sample of countries. These can to help situate a variety of Social Registries that could offer valuable lessons learned for other countries.

1. What is (are) the existing Social Registry(ies) and what is the current coverage (number of households and % of population covered)?
2. Does the Social Registry serve one or multiple programs (Integrated Gateway)? If it currently serves one program, is there a vision to expand its use to multiple programs?
3. What are the Intake and Registration processes – and what is the periodicity of open registration (Dynamic Inclusion)? Can anyone register in the Social Registry at any time for consideration of potential eligibility for social program(s)? If the current periodicity of registration is infrequent, is there a vision to move towards a more open and continuous system of dynamic inclusion?
4. What are the main sources of information included in the Social Registry? Self-Reported (via *en masse* data collection or on demand-applications)? Via data exchange with other information systems?
5. What is the degree of Interoperability with other Information Systems?
6. What is the structure of database management for the Information System

Part 2 - Structural Features: Institutional Arrangements, Citizen Interface and User Programs

Key structural features for implementing Social Registries include institutional and legal arrangements for the social registry as well as citizen interface, as well as the use of Social Registries by (multiple) user program(s).

Institutional and Legal Arrangements for the Social Registry

One aspect which differs significantly across countries – and depends greatly on country context - is the institutional and legal arrangements for the Social Registry. Institutional and legal arrangements should be tailored to local realities, building on existing capacities and structures if they work well.

Institutional arrangements for the Social Registry include the definition of which actors are responsible for the various aspects of design and implementation, as well as the supporting formal policy and legal framework. Several aspects for institutional arrangements should be considered as part of an “***institutional assessment***,” including identifying the “host agency” for the Social Registry, the operating agent, arrangements between the Social Registry and user programs, arrangements (including the agencies, local offices, or contracted firms that

are tasks with outreach, intake and registration – or inter-governmental relations if sub-national registries are being linked to a national registry). Some Social Registries are operated by an agency that manages a specific social program; others are “housed” by a specialized “host agency” that serves as the operating agent. Some Social Registries are centralized in design and information management, but with decentralized registration and data collection. Others aggregate sub-nationally managed registries into a national registry. The institutional assessment may be taken to an even deeper level to carry out a **functional review**, to examine institutional capacities including organizational structures, human resources, IT capacity (see also Part 4 of the Assessment Tool below), and so forth. Institutional responsibilities for specific processes along the delivery chain can also be mapped using “swim lanes tools” called “**Delivery Chain Process Mapping**,” as illustrated in Annex 2.

The **legal framework** also plays an important role in establishing and regulating social registries and can take different forms depending on the country context. Regardless of the institutional and legal arrangements, clarity of roles, processes, communications, financing, administrative cost-sharing, and quality control is essential. Some Social Registries are created by law while others are set up through less formal means. Regulations or operational guidelines typically govern implementation.

1. What entity(ies) is the “host agency” for the Social Registry? What entity(ies) (are) responsible for managing and administering the Social Registry?
2. Is there a coordination body or steering committee involving different government agencies and stakeholders that focuses on Social Registry coordination?
3. What are the main administrative levels of governance for the country?
4. What is the organizational structure, core human resource capacities, and IT capacity for managing the Social Registry? (Functional Review)
5. What are the main institutional roles and responsibilities for specific processes along the delivery chain (see also Part 3 of the Assessment Tool below, as well as an illustration of Delivery Chain Process Mapping in Annex 2).
6. What is the legal, regulatory and policy framework governing the roles and responsibilities for the Social Registry?
7. Are there established and documented management standards, guidelines and processes for managing and operating the Social Registry?

Citizen Interface (also crucial for “Dynamic Inclusion” aspects)

Another central aspect for implementing Social Registries is the set-up for “Citizen Interface” – i.e., the point of contact for citizens (registrants / applicants, potential or actual beneficiaries of social programs) with the Social Registry System. This citizen interface can take many forms, such as: (a) at local office, service window, or kiosk; (b) via mobile teams; (c) via social workers, frontline staff or enumerators; (d) via digital service windows, and so forth. They can be managed by central agencies (e.g., staff or contractors hired by the central agency) or by local governments. It can also be handled explicitly as the “citizen interface” for the Social Registry – or implicitly via a (host) user program. The citizen interface also has an important “time dimension,” meaning: is the point of contact for citizens available to them on a *permanent* or *infrequent* basis? This is a key ingredient for determining whether or not Social Registries can serve as a “dynamic gateway” for inclusion of applicants at any time. Another related aspect is whether or not this “contact” (e.g., intake and registration) is initiated by the applicants themselves (e.g., on demand) or by the administration (e.g., via supply-driven *en masse* data collection). Finally, an important aspect of citizen interface is the “user experience” of the citizens themselves – and if the point of contact and associated processes are citizen-centered and service oriented.

1. What are the “points of contact” for citizens (applicants) to interface with the Social Registry? Are the entry points via specific program(s) or via explicit arrangements for the Social Registry itself?
2. What institutions are responsible for those points of contact? How are the administrative costs of the citizen interface financed?
3. Is there a physical location (e.g., local office, service window) where citizens can interface with the Social Registry system?
4. Who staffs the citizen interface? Social workers, mobile teams, facilitators, frontline staff, enumerators, or community representatives? Who manages and finances those staff?
5. What services can citizens carry out via that point of contact? Can they: (a) Register in the Social Registry (or “apply” to one or many programs via the Social Registry)? (b) Update, review or rectify information in the Social Registry? (c) Request grievance redress or request re-review or appeal of eligibility decisions (for the information in the Social Registry that is used to determine potential eligibility for social programs)? (d) Track and monitor application status? Queries? Etc.
6. How often can citizens access that point of contact? On a permanent basis? Or on a periodic or infrequent basis?
7. What are the communication channels for citizen interface (face-to-face, digital (mobile/tablet/PC/laptop), phone (direct/toll-free lines/IVR))?
8. Are citizens (especially those who are marginalized, remote or vulnerable) able to participate in the design of the intake and registration process to better take into account their specific needs and conditions that may not immediately be apparent to policy makers and administrators at the center (i.e., a citizen-centered approach to designing the system)?
9. How many citizens are served by the interface per day/week/month?
10. At what administrative level(s) do the citizen interface(s) operate?
11. Does the citizen interface cover intake and registration, case management, grievance and redress mechanisms? Any other functions or business processes covered?

User Programs for the Social Registry (Single-Program or “Integrated” Multi-Program Gateway)

A key distinguishing feature for Social Registries is whether or not they serve a single or multiple programs. A Social Registry for a single program enables the effective use of information that is essential to the registration and eligibility determination of potential beneficiaries for that particular program, and facilitates transparency, accountability, and monitoring. When used for multiple programs, Social Registries can reduce transactions and private costs for citizens and the administration. For citizens, with a common entry point, they would avoid having to provide the same personal data separately to apply for multiple programs. For the administration, this arrangement would be expected to reduce administrative costs because not every program would have to invest in carrying out the business processes of intake and registration, which can be quite costly, as well as the information management aspects of managing these processes.⁵⁹ When these efforts are consolidated, the Social Registry should be able to ensure a high level of data quality and accuracy.

1. Does the Social Registry serve one or many programs delivering benefits/services? What are the user program(s) or potential user program(s) of the Social Registry?
2. How are the user program(s) using (or planning to use) information from the Social Registry? For eligibility determination and enrollment? If so, do they take enrollment decisions directly on the basis of information from the Social Registry, or do they combine it with other program-specific criteria? What are other uses of

⁵⁹ Adequate budget for these processes must be maintained for the common Social Registry, however, and financing or co-financing arrangements should be clarified among user programs and the host agency.

the information from Social Registries? For monitoring or cross-checking with other information? Other uses?

3. Do citizens have to register with the Social Registry AND apply separately for some user programs that they may be eligible for? Or will one application with the Social Registry suffice to be considered for potential eligibility for the user programs (benefits and services)? Or can they apply for a particular user program, which can pass the required information to the Social Registry?
4. What are the main population target groups of these user program(s)? Are these national or sub-national in coverage?
5. What is the definition of the registering unit (individual, family, household) for the Social Registry and the assistance unit for specific social programs?
6. What are the eligibility criteria for these user program(s), including conceptual and operational definitions of each variable, aggregation calculations for welfare measures, and eligibility thresholds?
7. Can these eligibility concepts be harmonized for use in a multi-program Social Registry? What is needed to harmonize these concepts?
8. Is there a common questionnaire to serve the multi-program Social Registry? Has this been vetted and agreed by the various user program(s)?
9. Are the eligibility criteria known or transparent for citizens (potential registrants or potential beneficiaries)?
10. Regarding data sharing by the Social Registry with the User Programs & other partner institutions (such as policy-making or analytical research bodies):
 - a. What are institutional arrangements, legal standards and protocols or memorandums of understanding for data sharing between the Social Registry and User Programs or other partner institutions (such as policy-making or analytical research agencies)?
 - b. Are there service standards for providing information from the Social Registry to user programs? Who monitors those service standards?
 - c. Are there cost-sharing arrangements for financing the administrative costs of the Social Registry across user programs, or are those costs recorded and absorbed by the Social Registry agency or by a “primary host program?”
 - d. Do the User Programs feed information on enrolled beneficiaries back to the Social Registry? If so, what type of information?

Part 3 - Delivery Processes: Outreach, Intake & Registration, Assessment of Needs and Conditions to Determine Potential Eligibility, Updating, and Grievance Redress

As discussed in Chapters 2 and 3, the core function of Social Registries is to support registration and determination of potential eligibility for social programs. Along the “Delivery Chain,” this means that they support the implementation processes of outreach, intake & registration, and assessment of needs and conditions to determine potential eligibility for inclusion in selected social program(s) (the blue shaded parts of Figure 1 above), as well as the processes for updating of information and grievance redress.

In addition to the assessment questions suggested below, Delivery Chain Process Mapping (DCPM) is a useful tool for assessing institutional roles and sequencing of core business processes within these implementation phases. Annex 2 illustrates DCPM tools with a hypothetical visual example. With this tool, each actor is assigned a “swim lane,” and then core business processes are mapped in sequence across those lanes. This mapping helps assess the robustness of the delivery chain by identifying “who does what” and “when” for core business processes supporting the functions of the main implementation phases. Uniqueness of role assignments is

crucial for the principles of clarity and accountability – and the term “swim lanes” is used to symbolize the concept that each actor “stays in their own lane,” without crossing lanes for role confusion. DCPM tools can also be useful for mapping reforms. For example, the current institutional responsibilities can be mapped for business processes “as is.” Envisaged reforms can then be mapped for the “to be” scenario to highlight key changes in processes, sequencing, automation, and/or institutional roles and responsibilities.

Outreach

Outreach involves interactions to inform people about social programs, build awareness, and encourage potential beneficiaries to apply. Outreach can also involve two-way communication to better inform program or registry design by gathering inputs, views, and feedback from people and other stakeholders. “Active Outreach” is often used to proactively reach vulnerable groups that may otherwise be uninformed about social programs or their rights. Outreach efforts can be carried out by Social Registry actors, user programs, or both. It is imperative that accurate and consistent information about citizen rights and responsibilities for both the Social Registry *and* user programs be shared, as well as eligibility criteria for user programs, types of information and documentation that would be needed, and the nature of use and users of information that would be collected, as well as information security precautions.

1. To what extent are special efforts made to reach out to individuals, families, groups and communities, such as people with elderly with mobility issues, people with disabilities and people living in remote areas?
2. Are there ethnic and language differences within a country that should be taken into account in developing the outreach strategy? If so, are they taken into account in the outreach strategy? How pro-active is the outreach strategy for the Social Registry?
3. Which agency/local government level is responsible for defining the outreach strategy?
4. To what extent are various communications, media and social media channels used to inform the population about the Social Registry and the means to register?
5. Are communities involved in any process of the outreach? Which processes?
6. Is there high awareness of the Social Registry (and user programs) among the population of interest?
7. Are citizens informed of their rights and responsibilities? Is it standard process to inform citizens various aspects such as: (a) that registering for the Social Registry does not guarantee enrollment in social programs or awarding of benefits? (b) how the intake and registration process works and what information or documentation will be required of them? (c) how their information will be used and how they can access their information or query the system? (d) how and when they need to update their information?
8. Does the outreach for the Social Registry also provide information with regards to various Social Programs (user programs) and their eligibility criteria, as well as next steps regarding notification or follow up (while also informing citizens that registering does not guarantee enrollment or benefits of any kind)?
9. What kind of supervision and monitoring procedures are in place for evaluating the quality of the communication and outreach?

Intake & Registration Processes

Intake & Registration involves the process of collecting information to register the intended population for consideration for potential inclusion in social program(s). Such information can include: personal and household identifying information (including unique national identification); socio-economic information; and other information on needs and conditions. It is important to characterize up front the type of intake and registration

process used, whether it is via *en masse* registration, on-demand applications, or a mix of the two. Some of the core factors to consider when assessing intake and registration processes include the following:

1. Which agency/local government level is responsible for intake and registration processes? (see also Delivery Chain Process Mapping discussion and tool in Annex 2)
2. Who carries out intake and registration processes? To what extent are these processes supervised, subject to certification, etc.?
3. Does the Social Registry have manuals and training for social workers/interviewers/frontline workers/enumerators and supervisors?
4. Where are the interviews carried out? Are home visits required (for all registrants or some subset)?
5. Is an online application available?
6. Is access to registration open and continuous, whereby people can register at any time (usually through a local office or a digital service window for citizens)? Is there a specific open enrollment period? Or is it open throughout the year? Or is it open until user program slots (budget) are filled up?
7. In the case of *en masse* registration waves are households in locations-not-surveyed allowed to apply for inclusion in the Social Registry?
8. How often does the questionnaire or application form change? In the case of *en masse* registration, do the different information collection waves allow continuous analysis of the data over time?
9. Are households whose situation has changed allowed to apply for inclusion in Social Registry?
10. Are individuals required to provide an ID and/or other forms of documentation and certificates during the intake and registration process?
11. Do registrants (applicants) sign statements certifying veracity of information provided?
12. Are citizens informed about how the information they provide will be used by the Social Registry administrators and user programs? Do they give consent for the information to be validated and provided to other agencies (such as user programs), e.g., via consent forms?
13. Is there a plan for updating or rapid expanding intake and registration in times of crisis or emergencies? Does the Social Registry have expedited intake and registration protocols and procedures?

Assessment of Needs & Conditions to Determine Potential Eligibility

Assessment of needs & conditions involves systematic processes and methodologies for determining the needs of applicants (potential beneficiaries) using various eligibility criteria and screening tools for the purposes of determining potential eligibility for programs, and informing the determination of the potential benefits package and service strategy. In most Social Registries, this assessment is typically automated via software applications (discussed below).

1. Which agency oversees or manages the process for determining eligibility? (see also Delivery Chain Process Mapping discussion and tool in Annex 2)
2. What are the main steps in determining potential eligibility for social assistance programs?
3. Are the process and eligibility criteria automated within the Social Registry (via software applications)?
4. Are the process and eligibility criteria for determining potential eligibility established by law or regulation and/or written up in any manual/guide?

Determination of Potential Eligibility vs Enrollment Decisions

It is important to note that the *determination of potential eligibility* is a distinct phase from *enrollment decisions* along the Delivery Chain (Figure 1 above). Determination of potential eligibility involves aggregating and analyzing categorical and socio-economic information gathered in the Social Registry to assess individuals' and families' needs and conditions vis-à-vis basic eligibility criteria. Enrollment decisions involve the formal inclusion of eligible individuals or families in a specific program. However, not everyone who is deemed "potentially eligible" based on those criteria would be enrolled in a particular program, and the Delivery Chain distinguishes between these phases. There are several reasons for this, including (a) budgetary limitation that can limit space and coverage in the particular program; or (b) additional criteria guiding enrollment decisions, beyond the socio-economic information produced by the Social Registry. Moreover, the institutional jurisdiction of these phases can differ: enrollment decisions are typically the jurisdiction and legal responsibility of the user programs, not the Social Registry, particularly in cases in which the Social Registry is used for multiple programs.

Processes for Updating Information

Updating of information – and reassessment⁶⁰ of needs and conditions – is another key function of Social Registries. Outdated or static information on socio-economic status can lead to inaccuracies in the determination of eligibility and calculation of benefit levels. The frequency of updating depends on the type of information and specific variables (content). Not all information requires updating – some variables remain constant over time (such as birth dates or places, father's name), barring corrections to initial information. Updating of demographic information of individuals, which determines household composition, should be ongoing to account for births, marriages, divorces, deaths, migration, and so forth. The updating of self-reported socio-economic data should be mandatory from time-to-time because household situations can change rapidly and unpredictably, for example, with changes in employment status, health events, crises, etc. The periodicity of updating is also influenced by the sources of information for each variable, whether from self-reported information or from data exchange with other administrative systems.

1. Is the registration date recorded (for initial application and updates) in the Social Registry?
2. What are the rules and processes for updating and rectifying information (for various types of information and/or specific variables)?
3. Do citizens have the facility to update/rectify self-reported data on a periodic basis?
4. How and where do citizens go to update/ rectify their information? How are they informed of this? How often do they need to go and what information/documentation is needed?
5. What are the arrangements for periodic wholesale updating of Social Registry data (for *en masse* registration systems)? How frequent are these?
6. Are any updates of information handled "automatically" based on data exchange with other agencies? Which ones? What is the frequency of those exchanges and updates?
7. Are the programs using self-reported updates only, or also exchange some information for supporting some level of updating?

⁶⁰ The literature and common practice distinguish between "updating" of demographic information and "recertification" of socio-economic information. We focus on the different frequencies, periodicity, and sources of updating for different types of variables (demographic, socio-economic), and then the "reassessment" of needs and conditions by the Social Registry without getting into certifying *enrollment* decisions, which can depend on other factors measured in the Social Registry and is typically the jurisdiction of user programs (as discussed above).

Grievance Redress

Grievance redress mechanisms (GRMs) or complaint handling mechanisms/systems are constructive and continuous feedback channels between beneficiaries/citizens and government/service providers. “Grievances” imply beneficiary and citizen feedback, which not only include complaints but also information inquiries, suggestions, and compliments. Well-designed and implemented GRMs can help program/project management significantly. They help generate public awareness about the program/project and its objectives, deter fraud and corruption, mitigate errors and risks (e.g., inclusion and exclusion errors, delays and errors in payment), provide program/project staff with practical suggestions and feedback that allow them to be more transparent, accountable, and responsive to beneficiaries and citizens at large, test the effectiveness of internal organizational processes, and increase stakeholder involvement in the program/project. An effective GRM and trend analysis of grievances can help arrest problems before they become more serious or widespread by taking necessary corrective actions if needed, and thereby preserving the program/project funds and its reputation⁶¹. Therefore, setting effective GRMs are needed and careful system design and consideration of the specific institutional context and administrative setting. GRMs must be in place to minimize incentives and opportunities for error, fraud and corruption and some specific design features include good communication campaign to inform population about their rights and responsibilities as well as the channels for making a claim, in order to eliminate opportunities for bribery and opportunity for corruption. Note also that setting up adequate administrative procedures includes ensuring that administrative processes are clearly defined and that staff and other resources are adequate to carry them out; instituting a range of quality control procedures to ensure that process is respected, information systems have appropriate safeguards, etc.

1. Is there a functioning grievance redress system to document and handle complaints (e.g., about gaining access to register, or about information concerns, and so forth)?
2. How are grievances and appeals triaged between those pertaining to the Social Registry vs those pertaining to user program(s)?
3. What % of grievance cases received a response? Was the response received within the time-frame established to do so?

Part 4 - Information Systems Aspects

Operationally, Social Registries are Information Systems, since information is the core input and output of Social Registries. An Information System is an interdependent group of elements that function together to accomplish some predefined goal (or to solve an organizational problem) by collecting, organizing, storing, processing, creating and distributing information. To accomplish that goal, an information system makes use of a variety of system elements, namely: (a) data and information; (b) software; (c) database management; and (d) ICT infrastructure, as well as institutional aspects (people, procedures, documentation, etc). Social Registries include all of these elements, though their architecture is also quite diverse in terms of sources and content of information, degree of interoperability, structure of database management, and so forth.

Data and Information

Information and data are core input and output of Social Registries. The main “inputs” to the system include various types of information needed to determine potential eligibility for social programs, and for this reason many end up calling this as database. The primary “outputs” of social registries are data that have been transformed into standardized formats or aggregations that permit assessment of needs and conditions against program eligibility criteria. These “outputs” can vary across multiple program users if they have different

⁶¹ See Kumagai and Agarwal (Forthcoming, 2017)

eligibility criteria or thresholds – as long as the data are gathered in the Social Registry and the user programs share common “data dictionaries” and concepts for the variables included.

Social Registries capture a variety of types of information – and with different methods of data collection. Once the intake process ends, there are some basic procedures to be carried out to transform this data into information for the Social Registry, that is, data need to be validated and verified. Validation involves checking that the data are complete and consistent for each person registered, and that each person is unique. Data should also be subject to external verification, in person (e.g., random home visits) or via cross-checking with other information systems. Once data have been verified and validated, the Social Registry is ready to be used, and it can be considered reliable. Oversight and controls procedures and tools are also used for higher-level quality control, including cross-checks (internal and external), sample audits and re-reviews, and other mechanisms. Finally, protocols for personal data protection are needed, including the principles of consent, use and proportionality, data quality, confidentiality and security safeguards, responsible transmission and data sharing, right to access/correct/oppose data, and accountability.

Data Content & Sources

1. What types of information are collected and stored by the Social Registry?
 - a. Questionnaire/Application Form
 - b. Specific variables (demographic, socio-economic, etc.)
2. What type of modalities are used for collecting information?
 - a. Are data collected *en masse* data collection or a census sweep?
 - b. Are data collected onsite via mobile teams/facilitators/social workers?
 - c. Are data collected via local offices/citizen service centers?
 - d. Are data collected through a digital interface (mobile/tablets/laptops/PCs)?
 - e. Are administrative data pulled from other government institutions for curating and or validating information provided by applicant?
 - f. Once applicant data is collected, how is it uploaded to the system?
 - g. Can applicants upload these documents digitally through a citizen interface?
3. Which dataset will form (or formed) the initial basis for the Social Registry?
 - a. Will the Social Registry database be initially built up from existing beneficiary registries?
 - b. Will the Social Registry database be built up by transferring datasets currently owned by another institution, such that the agency responsible for the Social Registry is the new custodian?
4. If data have already been collected:
 - a. Are there any gaps in these data (geographically or for full coverage of the bottom x% of population)?

Data Verification and Validation

It is crucial for the social registry to establish and apply procedures from the very data validation and verification. It is advisable that information updating mechanisms be developed and timelines specified such that this process occurs in a timely manner, ideally on a continuous basis. More specifically,

Data verification is the process of checking data to ensure that the value matches data that may have been provided to other government agencies. When data verification procedures are built into software applications, they rely on interoperability mechanisms to ‘talk’ to the databases of other government agencies. For example, data verification would involve checking whether a man who reports he is married on his intake and registration form, is verified to be true by checking data from the civil registration database. There are different ways to do

this. It can be done in person through a random supervision process where registries are chosen and the collected data are verified in the field. There needs to be clear and explicit courses of action in the case of mismatching or false registries. Verification can also be done through an administrative process. When other social registries or systems are available, these can be cross-checked with the data collected for the social registry and can act as an external verifier. Electronic is another option. Ideally this takes place online and implies having one or more validated systems that can be consulted by the social registry to verify the data. All of the above methods require standardized verification procedures and clarity with respect to who is in charge of the procedures. The people in charge should not be involved in the data collection process. The administrative and electronic methods, in particular, require agreements with other stakeholders who provide the comparison data for verification. No matter where they come from, it is highly advisable to have protocols duly agreed upon and signed by the stakeholders involved that regulate the process and the frequency of data verification.

Data validation is the process of ensuring that the data provided by citizens are valid (clean, correct and useful). When data validation is built into a software application, they use automated business rules to ensure the validity of the data.) A simple example of data validation would be to make sure that data on age provided by the citizen is a numeric input and is not more than 150 years, for example. The basic validation procedures that need to be followed for the data collected for the social registry are as follows:

- Check that the data is complete for each person registered. Ensure that all mandatory fields are completed. Data on all household members must be complete and correctly grouped. If even one piece of mandatory data for one household member is missing, the entire households' data will remain pending.
- Apply internal consistency grids to the registered data. Basic internal consistency grids must be defined.
- Check for duplication. For a valid, high-quality database, it is important that there be no duplication, meaning that no one is registered more than once. There must be standardized procedures to detect duplication, including specific responses for each situation.

1. To what extent are there defined protocols for data validation and data verification for the Social Registry, and are these protocols accessible to the appropriate stakeholders?
2. Who carries out the data verification and validation process?
3. Are home visits performed for verification (for all registrants or some subset)?
4. Is there a periodic data validation and verification process for guaranteeing reliability of the data?
5. Are there protocols to validate (through cross check and logic) and verify the correctness of data sourced from other administrative information systems?
6. What data cleaning processes are carried out?
 - a. Are the data received from main source checked against data standards and for internal consistency (including duplicate)? If yes, how many pieces of checking algorithm are applied? How many records are duplicate entries?
 - b. Are the data cross-verified/validated with other administrative data sources such as national ID and tax databases? If yes, how many data elements are cross-checked?
 - c. Can all the records failing to pass the above check step(s) be addressed by certain error or inconsistency rectification protocols in place?
 - d. What is the percentage of "cleaned"/useable data out of total "raw" data in terms of number of records?
7. What are the protocols when self-reported information conflicts with information existing in the Social Registry or other information systems?

8. Are there cross-checks on data from other administrative systems to ensure that the most current data is used by the Social Registry? In case of data conflicts, does the system show a red-flag or does the system automatically replace outdated data with the most recent data update from other administrative systems?

Oversight and Controls for Data Quality⁶²

Most Social Registry and social programs benefit from having well designed error, fraud and corruption (EFC) process that includes a good oversight and controls for addressing data quality. Fraud occurs when the applicant at the time of registration provides wrong information intentionally, while error occurs when it is unintentional. Corruption occurs when the staff intentionally changes information of applicants for its own benefit without applicant consent. Therefore, oversight and controls mechanisms are key to deter error, fraud and corruption in social protection programs. Such systems are complementary to demand-side social accountability mechanisms. Activities for prevention include improved verification of eligibility, provision of information to citizens and risk profiling. Activities for detection include risk-based and random reviews, data matching, risk profiling and telephone hotlines. Activities for monitoring are linked to performance management.

1. Is there a mechanism in place for the Social Registry to independently verify a sample of data received via home visit, spot check, or audit?
2. What are the supervision procedures for overseeing all processes for the Social Registry? Who is responsible for supervision, oversight and controls?
3. Are there any procedures/mechanisms in place to ensure that the “right” people are providing the “right” information? If so, how often are they used?
4. What types of cross-checks are automated into the Social Registry? Both internal cross-checks (within the Social Registry) and with other information systems? At what point along the “delivery chain” are these built into the process? Does the system carry out cross-checks immediately upon data entry or later in the process? How does the system flag inconsistencies? What are the protocols for rectifying flagged inconsistencies?
5. Is there a specific strategy in place to prevent fraud? Have there been any ad-hoc measures implemented to identify or prevent fraud? If so, what were the results of those activities and what were the consequences of anyone involved in fraud (benefit recipients or others)
6. What are the measured rates of detection and rectification of errors (of different types) and fraud? How and how often are these measured and reported?

Protocols for Personal Data Protection

The rise of the Internet and rapid changes in technology have accentuated the virtual aspect of privacy. Various categories of personal information may be regarded as sensitive or critical to personal security or social relations, and thus considered private. A number of countries are setting up Social registries, which gather or curate multiple types of information to assess needs and conditions. These include characteristics of individuals, families, households (“categorical factors”) and socio-economic status, including self-reported or verified income information, assets, education, health and employment status, access to services, or other aspects such as food security. In order to ensure the privacy of its members are protected, and thereby to ensure the public’s trust in the registry, it is critical that design of social registries take into account a human rights approach to personal data protection.

⁶² See Tesliuc (2017)

1. What are the protocols for personal data protection?
 - a. Is there a documented information security policy and a policy for confidentiality of personal information (privacy)?
 - b. Is there a personal data protection law and how does it apply to the Social Registry?
 - c. Are the data access control lists, user roles and security levels (confidentiality) defined to determine who can have access to what?
 - d. Is there a way to authenticate users who request access to the data in the Social Registry?
 - e. Is there a set of standards for data access, data use/disposal, and data confidentiality that the Social Registry must comply with?

Software Applications

Software Applications are also crucial elements of Social Registry Information Systems. They can include many layers and support many functions to transform and use the data. One key layer involves core software applications to support the citizen interface, including modules to support: (a) registering to be considered for potential eligibility for one or many programs (software-supported applications or questionnaires); (b) updating of information; (c) filing an appeal or grievance; (d) requesting grievance redress; (e) tracking and monitoring registration status; and so forth.

1. Does the Social Registry have a front-office software application for citizens and social workers/facilitators/mobile teams?
2. Does the Social Registry have a back-office software application for administrators in central/subnational government agencies?
3. What kinds of functionalities are available through the front-office software application?
 - a. Apply to one or many programs
 - b. Update information
 - c. Make an appeal (for someone whose data was collected to inquire about their information and appeal in the event they were deemed ineligible for a particular social program based on information from the Social Registry)
 - d. Request grievance redress (example, individual or household whose data were not collected through any of the citizen interface modalities described earlier, to be registered and included in the Social Registry, or who disagree with their assessment)
 - e. Track and monitor status of registration status, grievances, appeals, etc.
 - f. Analytics and reporting.
4. What kinds of functionalities are available through the back-office software application?
 - a. View data on household members, demographic, socioeconomic data, housing & assets, all programs registered etc.?
 - b. Assess eligibility applying the policy
 - c. Generate an eligibility list
 - d. Data processing, cleaning, cross-checks etc.
 - e. Data exchange – pushing eligibility data to beneficiary systems, and pulling applicant data from other administrative system
 - f. Analytics on registrants, updates, eligibility, etc.

5. Which of these functionalities and software applications already exist?
6. How will these software applications be designed, developed, operated and maintained?
7. Is there a modular approach to software applications development and management?
8. Will the software applications be built in-house or outsourced?
9. Are there user guides for operating the application?
10. Is training required and how will users be trained to operate the application?
11. Is there an open source policy for applications development?
12. How many technical staff are responsible for designing, developing, operating and maintaining the Social Registry?
13. How will technical capacity be built to ensure sustained support for the systems?

Database Management and Interoperability

Database management varies significantly across countries, and there is no one single model for this. Information systems are developed over time using different database management systems, and may be owned by different parts of an organization. As a result, data are fragmented across a number of hardware, software, organizational and geographic boundaries. Several kinds of architectural models are possible, including a centralized and a virtual or federated data management model. In this section we also review data sharing and interoperability mechanisms between the Social Registry and other administrative information systems.

1. Who “owns” or “hosts” the database (custodian)?
2. Which database technology platform is used to house the data?
3. What is the current database size?
4. Who manages the database?
5. Is there an access control policy for the database
6. Is there a data management manual to establish data processing and data service protocols, particularly ensure data integrity and confidentiality
7. Does a data dictionary exist, with information (or metadata) about data? For instance metadata on the definition and meaning of the data, relationship to other data, origin, usage and format, and the relationship between tables (Entity-Relationship diagrams – see image)?
8. Is the data dictionary in a manual format (passive) or is it an active data dictionary that is used by the database management software to automatically update data structures?
9. Does a data model (that complements the business process model) for the database exist?
10. How do you validate (through cross check and logic) and verify the correctness of data sourced from administrative e-government systems? Is there a mechanism for feeding back verified data to administrative systems?
11. Reporting and Analytics
 - a. How does the system generate reports?
 - b. Are reports based on individual records or aggregated?
 - c. Are there standard recurring reports?
 - d. How often are you asked to generate an ad hoc report?
 - e. What kind of techniques are used for data analysis, data visualization and data dissemination?
 - f. Is data gathered from a data warehouse or a data mart for analytics?

- g. Is Online Analytical Processing (OLAP) for multidimensional data analysis used for analysis – i.e., consolidation (roll-up), drill down and slicing and dicing?
 - h. What kind of tools are used for analysis – Tableau etc.?
 - i. What is the frequency of monitoring and reporting?
2. What are the modalities for data sharing with other institutions and information systems?
 - a. Which systems would the Social Registry exchange data with? ID? Civil Registry? Tax? Education? Property? Other?
 - b. What are the technical protocols to share data between different agencies?
 - c. Is there an interoperability framework to facilitate data sharing between agencies?
 - d. What is the degree of inter-operability with other information systems (cross-checks- automated or batch matches, real-time etc.)
 - e. Does the dataset include a unique ID (or set of identifiers) for applicants/potential beneficiaries that can be utilized for interoperability and data sharing between agencies?
 - f. Is there a data dictionary for the dataset?
 - g. Are data definitions in the data dictionary standardized, harmonized and aligned with definitions from the statistical agency, and/or other government institutions to ensure data interoperability?
 - h. Are there inter-agency data standards, who sets and enforces them?
 - i. Will the data set be cross-referenced with other sources of external data (civil registry, tax etc.) to ensure data integrity, accuracy and currency?
 - j. How is identity authenticated?
 - k. Are there biometrics to identify registrants and to prevent duplication?
 - l. Is there a determination of which types of data can be shared with which users?
 - m. What are the protocols for recording and reporting on data sharing?
 - n. Is the data encrypted, and are there other security measures for access, transfer and storage?
 - o. Are APIs used for data sharing between agencies?
 - p. Are there any feedback loops for data flows between user programs BACK to the Social Registry (e.g., updates from user programs)
 3. What kind of data integration approaches are used?
 - a. Web services/APIs?
 - b. Point to Point integration?
 - c. Enterprise Service Bus?
 - d. Data warehouse with ETL ?
 - e. Data virtualization?

ICT Infrastructure

ICT infrastructure refers to composite hardware, software, network resources and services required for the existence, operation and management of one or many organization's IT environment.

1. Describe the ICT infrastructure that supports the system. Is the infrastructure housed in-house (in a central place) or at a data center?
2. Is the data center owned by the agency or by a vendor?
3. Does the data center serve only the agency or is it a shared data center for some or whole of government?

4. Is there a system Integrity and risk management framework? Are the following activities carried out in-house or by a data center?
 - a. Stress-testing and capacity
 - b. Protection against data losses
 - c. Internet connection failover system
 - d. Electricity failover system
 - e. Backups
 - f. Vulnerability
 - g. Firewall
5. Are hardware resources sufficient or aging (based on a periodic review)?
6. Is access to servers and network devices restricted, controlled and monitored? Are they protected from the elements (sun/sand/water/fire)? Are they in a climate controlled environment?
7. Are disaster recovery systems in place? In case of disaster, are there standard operation procedures in place? Have these procedures been tested?
8. Are there connections to redundant power supplies, and arrangements for power interruptions?
9. What kind of network strategy is used?
10. What are the technology platforms upon which the information systems are based?

Institutional Aspects of Information Systems

To build and manage information systems for the Social Registry, a number of institutional and governance arrangements must be in place, including the appropriate IT skills, quality assurance procedures, financing, architecture, etc.

1. Are there information systems to support data and process management for the Social Registry?
2. If there are no information systems, how are applicant files managed?
 - a. Are there individual files for applicants?
 - b. Where are the files stored?
3. If there are information systems to support the Social Registry, what is the purpose of the system (choose all options that apply)?
 - a. To store and manage data on applicants
 - b. To automate registration and eligibility assessment processes
 - c. To manage data and processes
 - d. To serve as an applicant gateway for some or all social assistance user programs
4. Who owns the Information System? Who manages the system?
 - a. In-house
 - b. Vendor
 - c. Combination
5. If there are issues with the information systems, network, etc. is there an IT helpdesk you can call for help?
6. Is there sufficient budget for systems development, operations and maintenance?
7. Who pays for information systems design and development, operations and maintenance?
8. Is there a standard process for information systems development to ensure quality?
9. Is the architecture modular?
10. Is there a roadmap and sequencing plan to develop each of these modules over time?

11. How is software developed? Are any of the following software development lifecycle approaches employed?
12. How are information systems tested?
13. Does the development and launch of the system include training programs?
14. How is user feedback incorporated to develop systems enhancements, bug fixes and maintenance?
15. Is there sufficient in-house human resource capacity to support the development, operations and maintenance of the system?
 - a. Social Protection Specialists
 - b. Business/Systems Analysts
 - c. IT Architects
 - d. Software Developers
 - e. Database Administrators
 - f. System Administrators
 - g. Network Administrators
 - h. Others

Part 5 - Measuring the Performance of Social Registries

While the earlier sections focus on structures (actors), processes, and systems, this section focuses on indicators for measuring performance of Social Registries. Specifically, this section maps out some typical questions and indicators for measuring the performance of Social Registries around three key dimensions: inclusion (coverage, equity, accessibility); efficiency (for citizens, for systems, for user programs); and accuracy (quality of information, system integrity). This section also discusses aspects of systems for performance monitoring, reporting and analytics.

Inclusion: Coverage, Equity, Accessibility

1. What is the overall coverage of the Social Registry relative to the intended population? How has this coverage evolved since the inception of the Social Registry?
2. What is the coverage among the poorest quintile and 2nd poorest quintile?
3. What is the degree of awareness of the Social Registry among intended population?
4. Has there been any indication that active outreach to bring in hard-to-reach population groups has been effective? (e.g., measured by increased coverage of those groups - # added to registry)
5. Can anyone apply for registration into the Social Registry at any time? Or is the entry only possible periodically? Once a quarter, a year, or every few years (how often)? (Measure of “dynamic inclusion”)
6. Are there any barriers to inclusion in the Social Registry – e.g., those that would limit accessibility such as ID or documentation requirements?

Efficiency: for Citizens, Administrators, User Programs

For Citizens

1. Does the Social Registry offer a common application (questionnaire) for multiple programs?
2. How far is the frontline point-of-contact for citizen interface for the Social Registry from the poor populations (measures of distance for sample or by group)?
3. How long does the process of applying take?

4. How many visits need to be carried out on average to complete the process?
5. Are documentation requirements difficult to provide?
6. If there is a face-to-face interview process, how long does it take (time)?
7. If there is a home visit, how long does it take and who needs to be present?
8. How do applicants track about their application status?
9. What is the “user experience” for citizens in interfacing with the Social Registry system? Are there quality standards for time turnaround, number of visits, ease of access, etc.?
10. What are the private costs for registering in the Social Registry:
 - a. Time costs: travel time, waiting time, interview time, document preparation time, etc.
 - b. Money costs: transport, photocopies, etc.

For Administrators

1. How much time elapses for the end-to-end Social Registry process, from intake and registration to determination of potential eligibility (cycle time)?
2. What is the time taken for specific business processes (cycle time: for intake and registration, assessment of needs and conditions, etc.)?
3. What is the volume of applications processed through the system per day/week/month/year?
4. What is the frequency of transactions by the system?
5. What is the Total cost of ownership (TCO) of the system (includes direct and indirect costs).
 - a. Software cost (license, product per user charge, database, operating system software, server software, network software, maintenance fees, others)
 - b. Hardware cost (server hardware cost, network upgrades, desktop hardware, data center facilities, power supply/generators/UPS, cooling, maintenance fees, etc.)
 - c. Consulting costs (individual consultants or consulting firms) for design and implementation, deployment and upgrade, integration, future projects, etc.)
 - d. Personnel cost at central operating level (management, IT staff, administrators, etc.)
 - e. Costs at frontline for citizen interface (social worker/interviewer staff time, data processors, supervisors, IT staff and costs, etc.)
 - f. Training costs (staff time, trainer, location, materials, etc.)
 - g. Communication costs, based on roll-out strategy
6. Can direct and indirect benefits be calculated?
 - a. Direct benefits (reduction in paper costs, reduction in material costs –fewer mistakes-, increasing business value, reduction or increase in personnel cost, etc.)
 - b. Indirect benefits (measuring expected change in labor time or productivity, improved process management through reduced administrative overhead, reduced cost of errors and omissions, reduction non-value added time, etc.)
7. What is the cost of the system vis-à-vis population served/number of applicants
8. What are the costs to implement the Social Registry initially and per year since the inception?

For User Programs

1. What % of data records provided by the Social Registry are useable to enroll beneficiaries (in program X)?
2. What % of program X beneficiaries draw on data from the Social Registry for enrollment decisions?
3. Are the data from the Social Registry transmitted to User Program in a timely manner? In what frequency? What is the time lapse from the time of request for data to the time of transmission?

4. Are the data transmitted in usable format and with all agreed information?

Accuracy: Data Quality, Systems Integrity

To ensure data quality and accuracy of the Social Registry, tools, protocols, and procedures are needed to cross-check information, flag inconsistencies, and follow up and rectify error or inconsistencies. Systems audits are also useful for periodic reviews.

1. What is % of records with complete information (i.e. no missing values) in the database?
2. What % of records having some data updated last year (or appropriate time reference period)? Are there any estimates on how many records and data elements that were expected to be updated last year?
3. What % of active records for individuals (or households) have data that is greater than two years old (or appropriate time reference period)?
4. Is there a mechanism in place for the Social Registry to independently verify a sample of data received via home visit, spot check, or audit?
5. Are systems audits or independent Social Registry reviews conducted? If so, how often? What have been the results? Has the Social Registry been audited or assessed by national control agencies or 3rd party with regard to system integrity, security, and performance? What were the main findings? Were recommendations from these assessments monitored and carried out?
6. What are the measured rates of detection and rectification of errors (of different types) and fraud? How and how often are these measured and reported?

Systems for Performance Measurement, Reporting, Use in Social Policy Planning

This section takes stock of the performance monitoring, reporting, and analytics systems for the Social Registry itself. Social Registries should have mechanisms for monitoring performance, as they directly contribute to the performance of user programs. Performance also matters for the credibility of these systems. In addition, monitoring and analytics can facilitate the use of Social Registries for social policy planning, particularly when reforms are being introduced. Social Registries can also be used to gauge the potential demand for social programs.

1. Does the system have a performance monitoring system? Does it carry out user satisfaction surveys? Process evaluations? Analytics?
2. What are the standard monitoring reports for the Social Registry? How often are they issued? Who uses them and for what decisions? What variables are used to monitor overall quality of the registry?
3. How accessible is data (anonymous) in the Social Registry for analytical use? Is there an interactive, web-based system for analytics?
4. What data analytics using the Social Registry data have been carried out to support social policy discussion and decision-making? For example, designing new programs, scaling up or adapting existing programs, consolidating/coordinating existing programs, estimating fiscal cost?
5. Are these data analytics routinely required by the planning and/or budgeting authorities?
6. What types of evaluation reports have been generated using Social Registry data and analytics?

Bibliography

Alatas, Vivi, Abhijit Banerjee, Rema Hanna, Benjamin Olken and Julia Tobias (2012) "Targeting the Poor: Evidence from a Field Experiment in Indonesia." *American Economic Review* 102(4): 1206-1240.

Alatas, Vivi, Abhijit Banerjee, Rema Hanna, Benjamin A. Olken, Ririn Purnamasari, and Matthew Wai-Poi (2016) "Self-Targeting: Evidence from a Field Experiment in Indonesia," *Journal of Political Economy* 124, no. 2 (April 2016): 371-427. DOI: 10.1086/685299

Azevedo, Viviane; Cesar Bouillon, and Irrazaval, Ignacio (2011) "Sistemas Integrados de Informacion Social: su role en la Proteccion Social. Centro de Politicas Publicas" Pontifica Universidad Catolica de Chile.

Balderon, Cesar; and Maria D Arriba-Banos (2008) "Management and Information Systems in Social Safety Nets Programs: A look at Accountability and Control Mechanisms"

Barca, Valentina; and Richard Chirchir (2014 and revised draft May 2016) "Single registries and integrated MISs: De-mystifying data and information management concepts" DFAT: Australia

Barca, Valentina; and Richard Chirchir (2014) "Briefing: Integrated data and information management in social protection" DFAT: Australia

Baum, Tinatin; Anastasia Mshvidobdaze, and Josefina Posadas (2015) "Continuous Improvement: Strengthening Georgia's Targeted Social Assistance Program" *Directions in Development*. The World Bank.

Blakemore, Michael (2008) "Crossroads Bank for Social Security (CBSS)"

Brown, C., Martin Ravallion, and Dominique de Walle (2016) "A Poor Means Test? Econometric Targeting in Africa", *World Bank Policy Research Working Paper* 7915

Castaneda, Tarcisio; and Kathy Lindert (2005) "Designing and implementing Household Targeting Systems: Lessons from Latin America and the United States" *World Bank Social Protection Discussion Paper Series*, No. 0526, World Bank.

Chirchir, Richard; and Shez Farooq (2016) "Single Registries and Social Registries: clarifying the terminological confusion" *Development Pathways, Pathways' Perspectives Issue Number* 23

Coudouel, Aline; and Solene Rougeaux (2016) "Social Registries – How to Ensure the Protection of Personal Data." mimeo

De la Briere, Benedicte; and Kathy Lindert (2005) "Reforming Brazil's Cadastro Unico to Improve the Targeting of the Bolsa Familia Program." *World Bank, Social Protection Working Paper*.

Del Ninno, Carlo and Bradford Mills (2015) (Eds.), *Safety Nets in Africa: Effective Mechanisms to Reach the Poor and Most Vulnerable*. The World Bank, Washington D.C.

Department for International Development (DFID), Department of Foreign Affairs and Trade, Australia (DFAT), and Oxford Policy Management (OPM). (January 2016). "Evaluation of the Kenya Hunger Safety Net Programme Phase 2: Drought Emergency Scale-up Payments Process Review"

Department for Social Welfare and Development (DSWD, Government of the Philippines) (2016). "*Listahanan: Frequently Asked Questions*."

Department for Social Welfare and Development (DSWD, Government of the Philippines). (May 2015). "Communicating for Reform in Conditional Cash Transfers and Social Registries: the Case of the Philippines' Pantawid Pamilya and Listahanan." Presentation.

Garrote, Jimena (2016) "Human Rights Standards and Social Registries."

Grosh, Margaret (1994) "Administering Targeted Social Programs in Latin America: From Platitudes to Practice" World Bank

Grosh, Margaret; Carlo del Ninno, Emil Tesliuc, and Azedine Ouerghi (2008) "For Protection and Promotion: The Design and Implementation of Effective Social Safety Nets" World Bank.

Jones, Theresa (2016) "Note on Country Experiences in setting up National Registries for National Social Safety Nets (prepared for Nigeria Working Group)" mimeo

Kalja, A., A. Reitsakas and N. Saard (2005) "eGovernment in Estonia: best practices," A Unifying Discipline for Melting the Boundaries Technology Management., 2005, pp. 500-506. doi: 10.1109/PICMET.2005.1509730.

Karippacheril, Tina George; Kim, Soonhee; Beschel, Robert P. Jr.; Choi, Changyong (2016) "Bringing Government into the 21st Century : The Korean Digital Governance Experience. Directions in Development--Public Sector Governance" The World Bank. <https://openknowledge.worldbank.org/handle/10986/24579> License: CC BY 3.0 IGO."

Kumagai, Saki, and Sanjay Agarwal, (Forthcoming, 2017) "Framework for Preparing Social Safety Nets for Subsidy Reform, Module 5: Enhancing Citizen's Trust through Citizen Engagement and Social Accountability during Subsidy Reform" The World Bank

Leite, Phillippe (2014) "Foundation of a SPL System: Introducing MIS and (social) registries" mimeo

Leite, Phillippe; and Celine Felix (2014) "Social Registries: Data Management Tool for Social Programs" mimeo

Lindert, Kathy; Jason Hobbs, Benedicte de la Briere, and Anja Linder (2007) "The Nuts and Bolsa of Brazil's Bolsa Familia Program: Implementing Conditional Cash Transfers in a Decentralized Context" World Bank. Social Protection Discussion Paper No. 0709.

Lindert, Kathy. (June 2005). "Implementing Means-Tested Welfare Systems in the United States." World Bank. Social Protection Discussion Paper Series No. 0532.

Lindert, Kathy. (2016) "Scaling Up of Social Programs & Unified Social Registry: The Example of Brazil's Bolsa Familia Program & the Cadastro Unico" Presentation in Jakarta, Indonesia.

Lindert, Kathy. (2016) "Scaling Up & Integration of SPL Delivery Systems" World Bank internal memo.

Lindert, Kathy; et. al. (forthcoming 2017) "Brazil's Social Safety Net: Federal Spending on Social Assistance, 2000-15." Working Paper (chapter for forthcoming Brazil Expenditure Review). The World Bank.

Lindert, Kathy (2017). "Georgia's Social Registry Information Systems Overview and Strategic Directions." Informal Technical Note. The World Bank.

Ministry of Family and Social Policy (Republic of Turkey). (April 2017). "ISAS Butunlesik: Turkey's Integrated Social Assistance System." Government of Republic of Turkey. Presentation.

Ministry of Family and Social Policy (Republic of Turkey). (2017). "Turkey's Integrated Social Assistance System." Government of Republic of Turkey & The World Bank joint publication.

Ministry of Social Development (Chile) (January 2017). "Household Social Registry: System that supports the Selection of Users of Social Benefits." Under-Secretary of Social Evaluation, Ministry of Social Development, Gobierno de Chile.

Mostafa, Joana; and N. Safyro (2014) "Cadastró Unico: A Registry" Supported by a National Public Bank. IPEA.

Office of the Vice President. Republic of Indonesia. TNP2K (2015). "Indonesia's Unified Database for Social Protection Programmes: Management Standards."

Palacios, Robert (2014). "Note on 'Registries' and other Elements of the Implementation Process of Programs that Deal with Individuals." Internal note. The World Bank.

Pop, Lucian, 2015, "Options for Improving the Targeting of Safety Nets in Ghana," In C. Del Ninno and B. Mills (Eds.), *Safety Nets in Africa: Effective Mechanisms to Reach the Poor and Most Vulnerable*. The World Bank, Washington D.C.

Ravallion, Martin, Dominique van de Walle and Madhur Gautam, 1995, "Testing a Social Safety Net," *Journal of Public Economics* 57(2): 175-199.

Ravallion, Martin, 2000, "Monitoring Targeting Performance when Decentralized Allocations to the Poor are Unobserved," *World Bank Economic Review* 14(2): 331-45.

_____, 2008, "Miss-Targeted, or Miss-Measured?" *Economics Letters*, 100: 9-12.

_____, 2009, "How Relevant is Targeting to the Success of the Antipoverty Program?" *World Bank Research Observer* 24(3): 205-231.

_____, 2016, *The Economics of Poverty. History, Measurement, and Policy*. New York: Oxford University Press.

Rawlings, Laura; et al. (2016) "What Matters in Social Protection Delivery Mechanisms." World Bank/ISPA Guidance Note.

Republic of Turkey, Ministry of Family and Social Policy, with the World Bank. (2016) "Turkey's Integrated Social Assistance System."

Silva Villalobos, Veronica (2015) "Social Registry Information Systems (SOCIAL REGISTRY): The Case of Chile" mimeo

Silva Villalobos, Veronica, et. al. (2015). *Avanzando Hacia Sistemas de Protección Social y Trabajo en América Latina y el Caribe*. The World Bank.

Silva Villalobos, Veronica (October 2016) "Integrating Social Protection Programs and Delivery Systems: Chile's Evolving Trajectory" mimeo, The World Bank.

Silva Villalobos, Veronica; Gaston Blanco, and Lucy Bassett (2010) "Management Information Systems for Conditional Cash Transfers and SP Systems in Latin America: A Tool for Improved Program Management and Evidence-Based Decision-Making." The World Bank.

Sluchynskyy, Oleksyy (2016) "Information Systems for Social Protection and Labor Programmes: genesis, typology, lexicon" mimeo

State Council's Leading Group Office of Poverty Alleviation and Development (2016) National Conference on the Rural Poor Household Registry Work (China)

Tesliuc, Emil (2015) "Measuring the Client Participation Costs and Administrative Costs for Means-Tested Programs." World Bank TOR.

Tesliuc, Emil (2016) "Reducing Error, Fraud and Corruption in Social Programs" The World Bank

Tesliuc, Emil; Lucian Pop, Margaret Grosh, and Ruslan Yemtsov (2014) "Income Support for the Poorest: A Review of Experience in Eastern Europe and Central Asia" Directions in Development. The World Bank

USDA (2015). SNAP System Integrity Review Tool.

Višnjić, Aleksandra, Dragan Raketić, Dragan Đukanović. "Montenegro's Social Card: Integrated Social Welfare Information System (SWIS): ICT for Reform of Social Protection Systems." Presentation.

WANG, Meiyang; Xiaobo Qu, and Peng Jia (2017) "Roles of Rural Dibao and Area-Based Antipoverty Programs in Eradicating China's Rural Poverty." World Bank Background Paper

Wiseman, William (2015) "Turkey's Integrated Social Assistance Service System. Case Study" mimeo

World Without Poverty (WWP) "Numerous documents on Brazil's Cadastro Unico"

World Bank (2012) "Resilience, Equity, and Opportunity: Social Protection & Labor Strategy"

World Bank Group – ID4D. (2015) "Identity Management System Analysis: Guidelines & Questionnaire"

World Bank Group and International Labour Organization. (2016) "A Shared Mission for Universal Social Protection: Concept Note."

World Bank Group (2015) "Strengthening Social Protection Systems to Manage Disaster and Climate Risk in Asia and Pacific." Internal Mimeo.

World Bank SPL Delivery Systems Global Solutions Group (GSG) (2016). "SPL Delivery Systems: Taxonomy of Core Terminology."

Yemtsov, Ruslan. (2016) "Social Protection: Universal & Poverty Targeting Approaches are not in Contradiction." Ideas4Development.org. Blog.

Interoperability Framework of the State Information System (2011) Ministry of Economic Affairs and Communication, Estonia.

Annex 1: Case Examples of Diverse Typologies & Trajectories of Social Registries

**Table A1.1 –Diverse Typologies and Trajectories - Summary of Country Cases
Information Circa 2015-2017 (systems will evolve beyond this date)**

| <i>Country & Name of Social Registry</i> | <i>Institutional Arrangements</i> | <i>Coverage: # of households & % of Pop.</i> | <i>SR as Gateway for one or more programs (“Integrated Gateway”)</i> | <i>Intake & Registration Processes (“Dynamic Gateway”)</i> | <i>Structure of Data Management & Degree of Interoperability</i> |
|---|---|---|---|---|---|
| Azerbaijan – VEMTAS (Unified Electronic Application and Awarding Subsystem) | Ministry of Labor and Social Protection of the Population | 41,272 households 10% of population | <i>One Program.</i> Targeted Social Assistance. Child allowance also allocated through VEMTAS but primary program is TSA | <i>On-Demand.</i> Electronic applications (only) through individual devices (computers, mobile phones, etc.), special e-government kiosks, or post offices | Centralized. Some interoperability with other administrative systems. |
| Brazil - Cadastro Unico (Unified Registry) | Managed and overseen by the Ministry of Social and Agrarian Development (MDSA) Implemented by the <i>Caixa Economica Federal</i> , a national bank, as the operating agent Municipal offices carry out intake & registration, citizen interface functions | 27.2 million households 40% of the population | <i>Multi-Program.</i> Legislated to serve multiple programs. First started serving Bolsa Familia Program (which consolidated 4 programs) and now serves 30+ federal programs plus sub-national programs. Some examples include: Bolsa Familia (CCT), PRONATEC training program, social energy tariff, Bolsa Verde (CCT for conservation in farming), housing program (Minha Casa Minha Vida), Brazil Literacy program, etc. | <i>On-Demand.</i> Started as merger of pre-reform social registries, then nationwide recertification in 2005-06. Since 2007, registration and updating are carried out on-demand on a continuous basis at local offices in municipalities, with active outreach to specific groups. Common application form for the Cadastro Unico that serves the various user programs. Registrants must report changes in status on an on-going basis, and go to the offices for a full update of all information every two years to be continued as potentially eligible for social programs. | Centralized. Limited interoperability. Conducts cross-checks with other information systems (RAIS/labor information system + tax information system). |
| Chile – Registro Social de Hogares (RSH) | The Ministry of Social Development manages the SIIS and within that, the RSH. All local citizen interface for intake, registration, updating are carried out via municipal offices (or online). | 12.3 million individuals, 4.7 million households 75% of the population | <i>Multi-Program.</i> Designed for multi-program use since its creation; now serves 80+ programs | <i>On-Demand.</i> Started as census sweep in early 1980s, with periodic national waves of registration & updates. System is now dynamic, with on-demand registration and updates via municipal offices, with citizen online platform for applications, updates since 2010. | Centralized, Data Warehouse. Considerable degree of interoperability. RSH is part of Integrated Social Information System (SIIS), which includes the RSH + an Integrated Beneficiary Registry (RIB); data exchange via national ID with numerous other info systems (taxes, social security, unemployment insurance, pensions, health insurance, educational status, property ownership, vehicles ownership, etc.) |
| China – Dibao Registry (and RHPR) | Ministry of Civil Affairs at national level and Civil Affairs Departments / | The total number of households is | <i>Multi-Program.</i> The Dibao Registry supports <i>Dibao</i> (subsistence security), and seven | <i>On-Demand – Dibao Registry.</i> People apply for various benefits using a common application form. In urban | Data in the Dibao Registry are centralized for planning purposes (only), but local governments manage their own registries |

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| | <p>Offices at province or county levels. Data intake and management tasks are primarily carried out at local level.</p> <p>In addition, since 2014, State Council's Leading Group Office of Poverty Alleviation and Development has developed a Rural Poor Household Registry (RPHR). The decision to have the two registries share data has been made recently</p> | <p>not reported. However, in 2015, 38 million households (69 million individuals) are Dibao beneficiaries (5% of population)</p> <p>RPHR covers 29.49 million households (89.63 million people in rural area, equivalent to 14.5% of rural population)</p> | <p>other anti-poverty programs such as destitute support, disaster relief, medical assistance, temporary assistance, housing assistance, education assistance, and employment assistance.</p> <p>RPHR also supports multiple programs.</p> | <p>areas, they apply via Neighborhood Offices; in rural areas they apply at Township government offices. These respective offices also manage data updates.</p> <p><i>En Masse Data Collection for RPHR.</i> It was first established in 2014 and then updated at least once a year.</p> | <p>in a decentralized manner to support the registration and eligibility determination functions for Dibao and other programs. Some interoperability such as cross checks and some data exchange with other systems.</p> <p>Data management is not centralized.</p> |
| <p>Colombia - SISBEN Sistema de Identificación de Potenciales Beneficiarios de programas sociales</p> | <p>National Planning Department (<i>Departamento Nacional de Planeación, DNP</i>)</p> | <p>10.4 million households</p> <p>73% of population</p> | <p><i>Multi-Program.</i> SISBEN now serves 31 programs and 8 institutions, including key SSN programs (Más familias en acción, Jóvenes en acción, Red Unidos), Health Subsidies, social pension, various early childhood programs, rural housing and land subsidy programs, youth programs, housing benefits, and others.</p> | <p><i>Both Methods: Nationwide En Masse Registration every 5 years + On Demand.</i> SISBEN was first launched in 1995 and, to date, it has had three rounds of data collection via the census sweep approach in geographically targeted areas. The next round of census sweep for 2017-19 is currently under preparation. SISBEN also allows for on-demand applications via municipal offices, with about a quarter of applicants registering through on demand since the last round of <i>en masse</i> registration in 2011.</p> | <p>Centralized.</p> <p>Some interoperability. Linked to Integrated System of Health Insurance (SIIS), Integrated Contribution System of Social Security (PILA), Information System for Operation of Subsidized Health Insurance (SISSUB), Information System for Regulation of Medicines, and more. Currently, SISBEN cross-checks data on a monthly basis with (i) the Social Security database (<i>Base Unica de Afiliados del Fondo de Seguridad y Garantía del Sistema General de Seguridad Social</i>), that receives information from the Registro Civil to update deaths and (ii) with the database of the Pension and "Parafiscales" unit of the Ministry of Finance to identify individuals whose salary is greater than five times the minimum monthly wage</p> |

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| Dominican Republic – SIUBEN (Sistema Único de Beneficiarios) | SIUBEN is managed by a specialized SIUBEN unit under the Social Cabinet within the Vice Presidency. That unit is responsible for gathering the information and managing the system. | 8.5 million individuals 85% of the population | <i>Multi-Program.</i> National Health Insurance (SENASA), gas subsidy, electricity subsidy, National Council for Aging, literacy program, support to Hurricane Victims, National Cancer Institute, National Commission for HIV-AIDS, National Institute of Student Welfare | <i>Nationwide En Masse</i> registration carried out every 4 years; planning next round of census sweep for 2017-18. For previous census sweeps, data collection was outsourced to NGOs and they supervised. Now, for the upcoming census sweep, the SIUBEN unit will hire enumerators and will have a “mirror” structure to supervise quality of data collection – repeating some interviews. | Centralized. Little interoperability with user programs; developing interoperability framework and capabilities as of 2017 |
| Djibouti – Unified Social Registry (Registre Social Unifie) | Managed by the Secretariat of State for Social Assistance, <i>Secrétariat d’Etat à l’Assistance Sociale (SEAS)</i> | 200,000 households 25% of the population | <i>Multi-Program.</i> Started single program, now 4 (Programme National de Solidarité Famille/PNSF, Programme d’assistance sociale sante/PASS, housing, programmes d’assistance ponctuelles) | <i>Targeted En Masse</i> registration in selected areas | Self-Contained. No interoperability yet. |
| Georgia - TSA Registry (aka “Unified Database of Vulnerable Households”) | Social Services Agency (SSA) in the Ministry of Labor, Health, and Social Assistance (MoLHSA) manages and operates the TSA Registry. Intake and registration carried out at local SSA offices. | 1.2 million people (or 36% of the population) | <i>Multi-Program.</i> Started as registry for Targeted Social Assistance Program (TSA), but now serves 16+ central government and sub-national programs, including TSA, Universal Health Care Subsidies, social energy tariffs, scholarships, foster care, legal services, various benefits for disabled and vulnerable families | <i>On-demand</i> via extensive network of local and regional Single Window Offices operated by the SSA. Common initial application form (basic information) and Family Declaration form (filled out at time of home visit). Program approvals and notifications should be carried out in 30 days or less. | Centralized. Some interoperability with other administrative systems for data exchange (tax revenue system, land cadaster, public property cadaster, utilities agency, vehicles registry in Ministry of Internal Affairs), as well as with user programs and municipalities |
| Indonesia - Unified Database (UDB) | UDB is currently managed by a Data working group” which consists of the Ministry of Social Assistance (MoSA), TNP2K, and the Coordinating Ministry for Human Development. By law, MoSA has jurisdiction over the UDB. TNP2K has been managing it to date, until MoSA can build up its capacity to manage it. | 24.5 million households 40% of population | <i>Multi-Program.</i> All major centrally funded social assistance programs: CCT (PKH), food programs, health insurance, scholarships, LPG subsidy, electricity subsidy. Also a large number of local programs financed by provinces or districts. | <i>En Masse Registration in specific areas</i> (not all districts are covered). Latest round of nationwide data collection was carried out in 2015. Piloting underway for testing on-demand applications in a number of districts. The Statistics Office collected the 2015 data. | Self-Contained. Little to no automatic data exchange with other administrative systems. |
| Macedonia - CBMIS (Cash Benefit Management System – includes Social | Ministry of Labor and Social Policy, with Municipal Centres for Social Work carrying out local aspects. | 347,029 households | <i>Multi-Program.</i> 24 programs, o/w 22 are rights (established by laws) and 2 are programs (approved by Government each year). | <i>On-demand</i> intake via Municipal Centres for Social Work (MCSW) using a common application form | Centralized. Some interoperability via web-services with the following systems: Office of Management of Registries of births, |

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| Registry within the System) | | 24.7% of population | Examples include: Permanent financial assistance, social financial assistance, CCT for secondary education, heating allowance, etc. | | marriages, deaths; National Employment Agency for monthly income, employment status; Agency for Real Estate Cadastre for property; Pension and Disability Insurance Fund. On-going project to enhance interoperability with numerous other systems underway. |
| Mali - Unified Social Registry (<i>Registre Social Unifié</i>) | The Ministry of Solidarity and Humanitarian Action is the host agency (primary anchoring agency). The Technical Unit of the RSU (UTGFS) ⁶³ is the operating agent, including information security and management, infrastructure, and software development. The RSU is also guided by a Steering Committee (political structure) and a Technical Committee. | 60,715 households 3% of population | <i>Multi-Program.</i> Started from scratch for a Single Program (JIGISEMEJIRI) and now also serving Health Insurance Program and eventually other programs | <i>Targeted En Masse.</i> Initial registration in 2014 used communities to identify short list of potential beneficiaries of JIGISEMEJIRI program to be interviewed for Social Registry. As the country enlarge the coverage of the Social Registry, the process is being reviewed to combine on-demand and communities for running a case management to identify marginalized and especial cases. | Self-Contained. No interoperability yet. |
| Mauritius – SRM Social Register of Mauritius | Hosted and managed by the Ministry of Social Security, National Solidarity, and Reform Institutions (MSS). Intake and Registration carried out by local Social Security Offices across the country. | 41,000 households (140,000 individuals as of 2013) 11% of population | <i>Multi-Program.</i> Child allowances, Housing, Creches, CCT, National Empowerment Foundation Programs (NEF). SRM provides program-specific beneficiary lists to user programs according to their eligibility criteria. | <i>On-Demand.</i> People can apply for all programs served by the SRM at the local Social Security Office, irrespective of whether the program is administered by the MSS or other agencies. Common application form. Intake can also occur with active outreach with agents on site. | Centralized. Some interoperability. Links to the Mauritius National Identity System (MNIS) for authentication. Interoperability with other systems run by MSS, including the National Pensions Fund (NPF) for income verification and with the Benefits System. |
| Mexico – SIFODE <i>Sistema de Focalización para el Desarrollo</i> | Ministry of Social Development SEDESOL. Information is gathered by programs, the system is managed within the SEDESOL. Local roles carried out by specific programs with common application. | 19.8 million people 16% of population | <i>Multi-Program.</i> The <i>Prospera</i> CCT program, Social Pension for Elderly, Productive Opportunities, Temporary Employment Program, Childcare Units, 3x1 Program for migrants, Development of Priority Areas. | <i>On-Demand via social programs.</i> The specific social programs collect information from a common questionnaire called the CUIS (unique for the SIFODE user programs). SEDESOL integrates the information from the applicants to the specific social programs. | Centralized. Some interoperability with Civil Registry and RENAPO (national ID). On-going project to develop an Integrated SP Information System “SISI” |
| Montenegro – SWIS Social Welfare Information System | SWIS is hosted and managed by the General Directorate for Information | 82,400 individuals | <i>Multi-Program.</i> Numerous social welfare cash benefits, war veterans benefits, case-based | <i>On-Demand.</i> People apply for benefits at the local Centers for Social Work using a common application (for means | Centralized. Some Interoperability. Automated and semi-automated interoperability with |

⁶³ This unit is currently supported by the JIGISEMEJIRI program, but will then be transferred to the host ministry.

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| | and Analysis within the Ministry of Labor and Social Welfare. Operational management of the SWIS is contracted out to the IT company which developed the software. Intake and Registration, as well as case management, are carried out by the local Centers for Social Work across the country. | (estimated Dec 2016) 34% of population | social services, support for individuals in institutions (elderly, children). | and asset testing). Social workers (case managers) also carry out a home visit to verify demographics and assets. Program approvals and notifications should be carried out in 15 days or less. | numerous administrative systems, including the population registry (for ID), tax system (public revenue office), pensions, health system, employment, Ministry of Interior (vehicles), real estate cadaster (property), etc. |
| Pakistan - NSER The National Socio-Economic Registry | BISP's NSER Wing, headed by a Director General, is responsible for the management and periodic update of the NSER. The Wing also caters to requests for data sharing by various organizations and programs. It is supported by the MIS Unit of BISP which is responsible for data safety, retrieval and sharing with other entities. | 27 million households (25.5 mn with full data and scores) 87% of the population | <i>Multi-Program.</i> The registry was first started to support the Benazir Income Support Program (BISP). Numerous (approx. 70) federal, provincial and non-governmental organizations have used the NSER as inputs to the selection of beneficiaries and/or for analytical or monitoring purposes. Examples include: conditional cash transfer (in addition to the BISP CT), health-related programs, child support programs, housing programs, family planning vouchers, livelihood and poverty alleviation programs, emergency relief (floods, refugees), food stipends, disability benefits, etc. | <i>Nationwide En Masse.</i> Started as census sweep in early 2009-11 for the BISP program. A new round of registration is being carried out from 2016-18, combining <i>en masse</i> registration (census sweep) in most areas, plus on-demand approaches in pilot areas. Most households are expected to be repeated and covered in both waves, making it a very large panel exercise (27+ million households in each wave). | Centralized. Some Interoperability with NADRA for authentication cross-checks with national ID. Some interoperability with user programs (some push the data manually). |
| Philippines – Listahanan (aka NHTS-PR: National Household Targeting System for Poverty Reduction) | National Household Targeting Office (NHTO) within the Department of Social Welfare and Development (DSWD) manages and operates the <i>Listahanan</i> . At local level, National Household Targeting Units (NTHU) within DSWD Field Offices coordinate with Local Government Units (LGUs). | 15.3 million households 77% of population | <i>Multi-Program.</i> Started as a pilot for one program (the Pantawid Pamilya CCT), then as grew in coverage and credibility, now serves 52 programs and many agencies and levels of Government. Examples include: the Pantawid Pamilya CCT, social pensions, subsidized health insurance, assistance to victims of disasters (e.g., food assistance for victims of typhoons), employment programs, training, internships, student grants, shelter, housing, | <i>Nationwide En Masse registration.</i> Initial registration starting in 2007; then <i>en masse</i> registration waves (census sweep) carried out in 2009-10 and 2015. The NTHUs contracted the field teams to carry out the registration wave. Households can request to be added to the Listahanan after registration wave “closed” through the Grievance System for the CCT (user program) and a process for “special validations.” Nonetheless, it is not an open door for on-demand applications. | Self-Contained. Not yet interoperable with other systems. Special assistant secretary appointed to oversee development of these capabilities. |

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| | | | rural electrification, sustainable livelihoods, and numerous sub-national programs. | | |
| Senegal – RNU <i>Registre National Unique</i> (National Unified Registry) | Managed by the Délégation Générale a la Protection Social et la Solidarité Nationale | 450,000 households (30% of the population) | <i>Multi-Program.</i> Started from scratch for a Single Program (PNBSF) and now also serving Health Insurance Program and other smaller programs | <i>Targeted En Masse.</i> Registration uses communities to identify list of poor and vulnerable households at village and neighborhood level based on a quota. Quota are determined based on poverty maps at the commune level. | Self-Contained. No interoperability yet. |
| Sierra Leone – SPRINT Social Protection Registry for Integrated National Targeting | Managed by the National Social Protection Secretariat, National Commission for Social Action. The Government is working to incorporate the use of the registry in the revision to the existing SP policy and this is expected to be turned into an SP Bill (and ultimately an Act of Parliament) later in 2017. | 55,000 households 4.7% of Population | <i>Multi-Program.</i> Four programs across two implementing agencies: Social Safety Nets Program, Rapid Ebola Response Social Safety Nets Program, Labor Intensive Public Works, Ministry of Agriculture seed distribution | <i>Targeted En Masse</i> in specific areas or among specific groups. Original intake is carried out by communities and contracted teams using mobile technology, but subsequent updates are carried out at district level (e.g., for changes in household recipient, demographics, location, etc.). Registry includes “active” and “inactive” households depending on whether they are benefitting from a specific program or not (to minimize having a very large registry with low program coverage) | Self-Contained. Little interoperability using household ID, for example with Anti-Corruption Commission System (which receives and filters all corruption and administrative grievances) |
| Turkey - ISAS Integrated Social Assistance Information System (<i>Bütünleşik</i>) | Social Assistance Directorate General (SADG) within the Ministry of Family and Social Policies (MoSFP) executes and manages the system, and provides hardware and maintenance. TUBITAK (Turkish Scientific and Technological Research Institution), which developed the software, provides system maintenance and development of new modules. Local functions are carried out by social assistance officers from the Social Assistance and Solidarity Foundations (SASF) throughout the country. | 10 million households, or 40 million people (as of 2016) 50% of population | <i>Multi Program.</i> ISAS provides gateway for potential inclusion in 17 programs, including various income support schemes (CCT, old age pension, disability pension, income support for coal, food, widows, etc.), Universal Health Insurance subsidies, housing (shelter and social housing), soup kitchens, education support (textbooks, lunch, transport, scholarships, etc.). | <i>On-demand</i> applications via electronic service windows or at local SASF offices, followed by home visits to collect core information on households and their members. The initial application is supported by a common “Application Form” (which is mainly for the submission of identity numbers and information plus an information consent form). The Home visit is supported by a common Questionnaire form, which contains about 50 questions. | Centralized, Data Warehouse. Considerable degree of interoperability. ISAS was launched in 2010 to standardize, integrate, and convert its previously paper-based social assistance procedures into an electronic system. ISAS is integrated with 22 institutions online via web services. The National ID number and PIN provide two-factor authentication and the key for linking across these systems. Example information systems that are linked to ISAS include beneficiary registries of various programs, population and citizenship registry, household registry, social security, revenues administration, vehicles, land registry, farmer registration, health control information, education (school attendance, grade transition, etc.), employment agency, etc. |

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| <p>Yemen – SWF Registry</p> | <p>Managed by the Social Welfare Fund</p> | <p>1.5 million households 30% of population</p> | <p><i>One Program.</i> The SWF Social Registry supports the SWF cash transfer program. The system is also used occasionally by donors (such as WFP, UNICEF) and other small programs to guide their interventions.</p> | <p><i>En Masse Registration in specific areas of the country</i> was carried out in 2008. Staff from the Social Welfare Fund plus consultants for the original 2008 registration wave. Updates of specific information are carried out from time-to-time for both beneficiaries of the SWF cash transfer and non-beneficiaries via District Offices of the SWF. A full-fledged update via <i>en masse</i> registration was planned for 2015, but the conflict situation prevented that wave from being carried out.</p> | <p>Self-Contained. No systematic interoperability.</p> |
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Sources: Compiled by authors with information from specific countries and social registry inclusion systems

Annex 2: Using Delivery Chain Process Mapping Tool for Social Registries

Delivery Chain Process Mapping (DCPM) is a useful management tool for assessing institutional roles and sequencing of core business processes within the implementation phases along the Delivery Chain. The objectives are to promote efficiency, transparency, and effectiveness of program implementation by identifying and sequencing key steps for implementation; and clarifying roles and responsibilities across actors (who does what and in what sequence). With this tool, each actor is assigned a “swim lane,” and then core business processes are mapped in sequence across those lanes. This mapping helps assess the robustness of the delivery chain by identifying “who does what” and “when” for core business processes supporting the functions of the main implementation phases. Uniqueness of role assignments is crucial for the principles of clarity and accountability – and the term “swim lanes” is used to symbolize the concept that each actor “stays in their own lane,” without crossing lanes for role confusion.

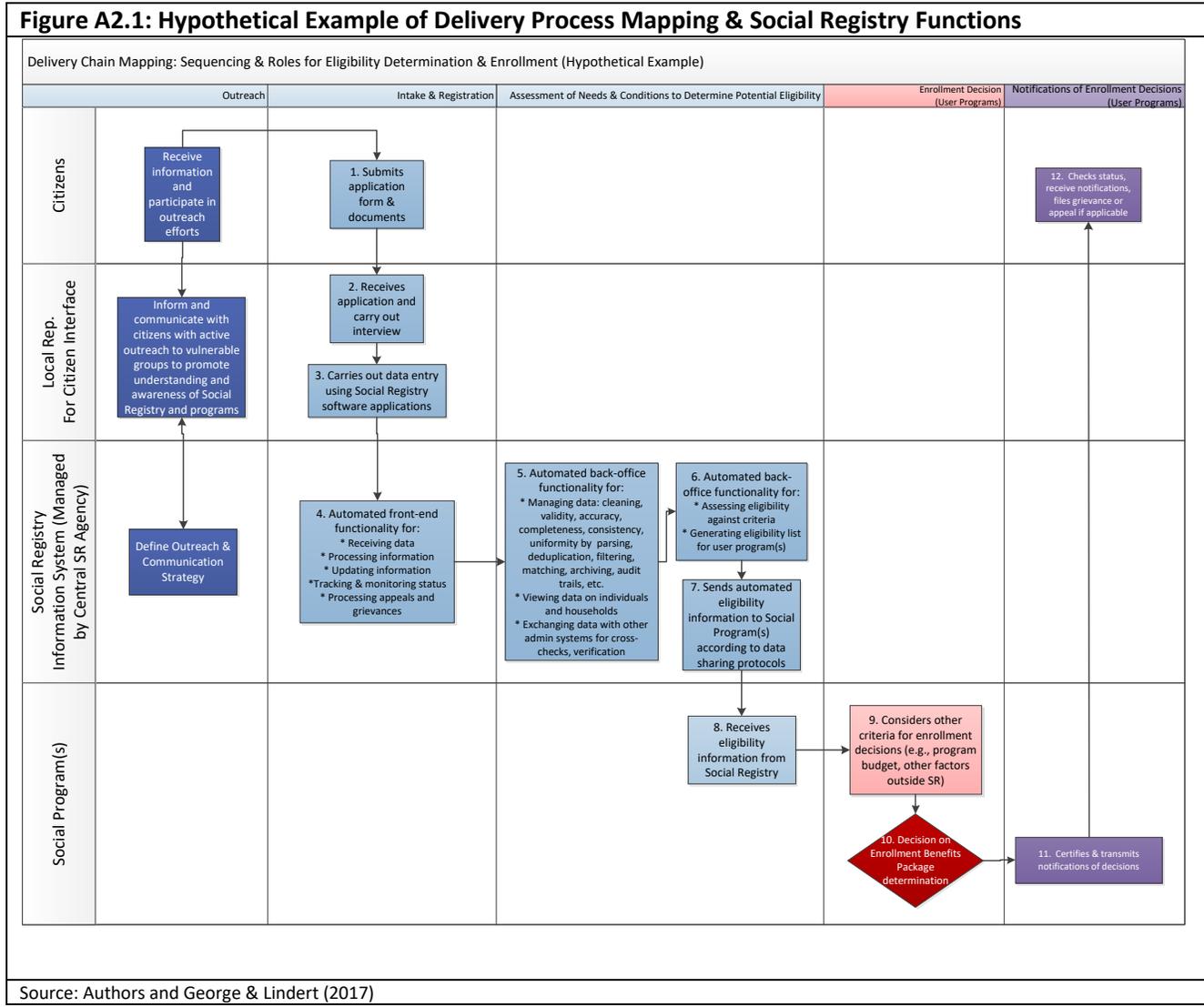
Ideally, DCPM would be carried out in a participatory manner with the participation of core actors. In this manner, each actor understand their own role, how their role fits with bigger system, and can help identify potential improvements and reforms. The participatory approach also helps build trust, consensus, ownership and understanding of the key processes along the delivery chain. The basic steps for DCPM include: (a) identifying the actors (e.g., citizens, local interface, info systems, central agency, service provider, other agency, etc); (b) discussing the roles and responsibilities of each actor along the “Delivery Chain;” (c) assigning a “swim lane” to each actor; (d) identifying the steps for the carrying out implementation phases along the Delivery Chain; (e) mapping the steps in sequence across the “swim lanes” for each actor; (f) reviewing processes for efficiency & effectiveness: are all of the steps really needed? Are they all “value-added” steps? Can some be eliminated to reduce unnecessary bureaucracy?

Figure A2.1 illustrates is a hypothetical example of DCPM for eligibility determination and enrollment decisions.⁶⁴ The roles of four key “actors” are mapped with “swim lanes” for each of the key delivery phases: (a) citizens (all applicants); (b) local representatives for citizen interface (e.g., social worker at local office or mobile teams); (c) the Social Registry Information System, managed by the Central Social Registry Host Agency (such as Ministry of Social Affairs); and (d) a User Program (could have multiple – and could be within Ministry of Social Affairs or in another agency). While it may seem surprising to include the Social Registry Information System as an “actor” in the system, it is important to map these functions since the process involves managing large quantities of information – and it is important to signal how the information system can support the delivery chain through the automation of key functions. Following the Delivery Chain in Figure 1 (main text), the sequence of “business processes” for the Social Registry are mapped for each of the core implementation phases of: (a) outreach; (b) intake and registration; and (c) assessment of needs and conditions (blue shaded columns in Figure A3.1). The processes for user program decisions and notifications regarding enrollment are also mapped in the two right hand columns (shaded pink and purple in Figure A3.1).

This is just a hypothetical example of DCPM: other institutional arrangements and sequencing of business processes could also be mapped depending on the country context. This example has user programs taking centralized enrollment decisions, but an alternative could be that the information from the social registry is sent back to the Local Government for “local validation” and enrollment decisions by local committees. Information could also be “curated” from other administrative systems to supplement the information gathered locally. And so forth.

⁶⁴ We used the “Swim Lanes” functions in Microsoft Visio software to map these processes, but other types of software could also be used.

DCPM tools can also be useful for mapping reforms. For example, the current institutional responsibilities can be mapped for business processes “as is.” Envisaged reforms can then be mapped for the “to be” scenario to highlight key changes in processes, sequencing, automation, and/or institutional roles and responsibilities.



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Abstract

This paper makes several contributions. First, it presents a “Guidance Note” on the framework for Social Registries, anchoring the definition of these systems in their functions along the Delivery Chain and their social policy role as inclusion systems, while clarifying terminology in a manner that is consistent with IT standards in the discussion of their architecture as information systems. Second, it illustrates the diverse typologies and trajectories of country experiences with Social Registries with respect to their (a) institutional arrangements (central and local); (b) use as inclusion systems (coverage, single or multi-program use, static or dynamic intake and registration); and (c) structure as information systems (structure of data management; degree and use of interoperability with other systems). These patterns primarily derive from a review of Social Registries in a sample of 20 countries), (Azerbaijan, Brazil, Chile, China, Colombia, the Dominican Republic, Djibouti, Georgia, Indonesia, Macedonia, Mali, Mauritius, Mexico, Montenegro, Pakistan, the Philippines, Senegal, Sierra Leone, Turkey, and Yemen). The paper also draws on experience in other countries (Kenya, Rwanda, Nigeria, Egypt, Jordan, Vietnam, India, Estonia, Belgium, the US, Canada, Australia, and others) to illustrate specific points. Third, this paper develops a basic “Assessment Tool” covering the core building blocks of Social Registries using a “checklist” style of questions. Given the wide diversity of Social Registries in both their role in social policy and in their architecture, the approach is not prescriptive: it does not advocate for any specific model or blueprint for Social Registries. Any diagnostics or recommendations that emerge from use of this Guidance Note and Assessment Tool will be country specific. Some key take-away messages include: (a) the importance of recognizing both the role of the “front lines” for outreach, intake and registration (Social Registries as inclusion systems) and the “back office” functions of Social Registries as information systems; (b) the potential power of Social Registries as integrated and dynamic gateways for inclusion; (c) the recognition that Social Registries are generally part of end-to-end systems for specific programs, integrated social protection information systems, and/or even “whole-of-government” approaches; and (d) there is significant diversity in the typology and trajectories of Social Registries across countries and over time.

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