





# INTEGRATING DATA AND INFORMATION MANAGEMENT FOR SOCIAL PROTECTION:

SOCIAL REGISTRIES AND INTEGRATED BENEFICIARY REGISTRIES

**OCTOBER 2017** 



Australian Aid

# INTEGRATING DATA AND INFORMATION MANAGEMENT FOR SOCIAL PROTECTION:

SOCIAL REGISTRIES AND INTEGRATED BENEFICIARY REGISTRIES

OCTOBER 2017

Valentina Barca

The principal author of this research report is Valentina Barca.

**Disclaimer:** The views expressed in this publication are those of the authors and not necessarily those of DFAT.

#### Creative Commons

With the exception of the Commonwealth Coat of Arms and where otherwise noted, such as copyrighted images, this booklet is licensed under a Creative Commons Attribution 3.0 Australia licence http://creativecommons.org/licenses/by/3.0/au/.

The report should be attributed as Barca V. (2017). Integrating data and information management for social protection: social registries and integrated beneficiary registries. Canberra: Commonwealth of Australia, Department of Foreign Affairs and Trade.

ISBN: 978-1-74322-359-8 (PDF document) ISBN: 978-1-74322-360-4 (Book, softcover) ISBN: 978-1-74322-361-1 (Word document)

### Use of the Coat of Arms

The terms under which the Coat of Arms can be used are detailed on the 'It's an Honour' website: http://www.itsanhonour.gov.au/coat-arms/index.cfm.

Inquiries regarding the licence and any use of the report are welcome at:

Department of Foreign Affairs and Trade R.G. Casey Building John McEwen Crescent Barton ACT 0221 Australia

+61 2 6261 1111 www.dfat.gov.au

#### Acknowledgments

Because of the very nature of this study – exploring a topic that is still under-documented in the literature yet widely applied in practice – a wide range of people have provided valuable contributions without which this research would not have been possible. The author thanks Richard Chirchir for his inputs including preparing the Kenya and Indonesia country case studies. The author also thanks the DFAT Social Protection Hub team, primarily Joanna Pickles, Fazley Mahmud and Francesca Lawe-Davies, for their ongoing support over the course of the research process. Important comments and peer review were also provided by Nicholas Freeland; Thibault Van Langenhove (ILO); Kathy Lindert, Philippe George Leite, Tina George, Changqing Sun and Oleksiy Sluchynskyy (World Bank); and Tarcisio Castaneda. We are similarly grateful to all the participants in the International Workshop on Integrated Data and Information Management for Social Protection held in Jakarta on 11–12 March 2015, who not only highlighted the need for further research on this topic but also provided fundamental inputs based on their country experiences. A special thanks to those who specifically supported the country case studies and boxes: Winnie Mwasiaji and Eva Mwangi (Kenya); Caglar Cinar and Sencer Kiremitci (Turkey); Pak Mahfudh and Julia Tobias (Indonesia); Caesar Vundule and Carin Koster (South Africa); Veronica Acha Alvarez (Chile); and Jeniffer Carla de Paula, Denise do Carmo Direito, Natalia Massaco Koga and Elaine Cristina Licio (Brazil).

### Join the community

Interested in the topic of integrated data and information management for social protection and social policy more widely? Join the www.socialprotection.org online community (http://socialprotection.org/connect/communities/social-registries-and-integrated-miss-social-protection).

### CONTENTS

1. INTRODUCTION AND SETTING THE SCENE 1.1 Why is integrated information management for social protection important? 1.2 Three objectives for integration: integrating what? 1.2.1 Providing coordination and oversight 1.2.2 Consolidating processes for determining potential eligibility for social assistance 1.2.3 Integrating and coordinating operations and services 2. DEFINITIONS AND APPROACHES TO INTEGRATION 2.1 Background to this study: confusion in the terminology 2.2 Defining the underlying terminology for the study: components of a social protection information system 2.3 Two main approaches to setting up a social protection data repository 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 1.5.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 1.7  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress? 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 4.1 Administrative and institutional aspects
1.1 Why is integrated information management for social protection important? 1.2 Three objectives for integration: integrating what? 1.2.1 Providing coordination and oversight 1.2.2 Consolidating processes for determining potential eligibility for social assistance 1.2.3 Integrating and coordinating operations and services  2. DEFINITIONS AND APPROACHES TO INTEGRATION 2.1 Background to this study: confusion in the terminology 2.2 Defining the underlying terminology for the study: components of a social protection information system 2.3 Two main approaches to setting up a social protection data repository 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 1.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 1.7  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
1.2 Three objectives for integration: integrating what? 1.2.1 Providing coordination and oversight 1.2.2 Consolidating processes for determining potential eligibility for social assistance 1.2.3 Integrating and coordinating operations and services  2. DEFINITIONS AND APPROACHES TO INTEGRATION 7.1 Background to this study: confusion in the terminology 7.2.1 Background to this study: confusion in the terminology 7.2.2 Defining the underlying terminology for the study: components of a social protection information system 8.3 Two main approaches to setting up a social protection data repository 1.3.1 Integrated beneficiary registries 2.3.2 Social registries 1.4 Comparing approaches 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 1.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 1.7  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.6  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
1.2.1 Providing coordination and oversight 1.2.2 Consolidating processes for determining potential eligibility for social assistance 1.2.3 Integrating and coordinating operations and services  2. DEFINITIONS AND APPROACHES TO INTEGRATION 7.1 Background to this study: confusion in the terminology 7.2. Defining the underlying terminology for the study: components of a social protection information system 8.3.1 Two main approaches to setting up a social protection data repository 1.0 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 1.6 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 1.7  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 2.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
1.2.2 Consolidating processes for determining potential eligibility for social assistance 1.2.3 Integrating and coordinating operations and services  2. DEFINITIONS AND APPROACHES TO INTEGRATION 2.1 Background to this study: confusion in the terminology 2.2 Defining the underlying terminology for the study: components of a social protection information system 2.3 Two main approaches to setting up a social protection data repository 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4.1 Comparing approaches 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 1.5.1 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 1.7  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
1.2.3 Integrating and coordinating operations and services  2. DEFINITIONS AND APPROACHES TO INTEGRATION  2.1 Background to this study: confusion in the terminology  2.2 Defining the underlying terminology for the study: components of a social protection information system  8.3 Two main approaches to setting up a social protection data repository  2.3.1 Integrated beneficiary registries  2.3.2 Social registries  2.4.1 Comparing approaches  2.4.1 Evolving nature and differing operationalisation  2.4.2 Types of integration enabled  2.4.3 How country context and needs affect choices  2.4.4 How different solutions compare to a country's total and 'eligible' population  1.5.1 Unpacking the role of the software application  2.5.1 Dynamic link to other databases  1.7  3. BRIEF OVERVIEW OF COUNTRY PROGRESS  3.1 Comparing progress across countries  3.2 What factors drive country progress?  3.3 Typology to classify country progress?  3.6  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
2. DEFINITIONS AND APPROACHES TO INTEGRATION  2.1 Background to this study: confusion in the terminology  2.2 Defining the underlying terminology for the study: components of a social protection information system  2.3 Two main approaches to setting up a social protection data repository  2.3.1 Integrated beneficiary registries  2.3.2 Social registries  2.4 Comparing approaches  2.4.1 Evolving nature and differing operationalisation  2.4.2 Types of integration enabled  2.4.3 How country context and needs affect choices  2.4.4 How different solutions compare to a country's total and 'eligible' population  2.5 Unpacking the role of the software application  2.5.1 Dynamic link to other databases  2.6 Dynamic link to other databases  2.7 Spoles across countries  3.1 Comparing progress across countries  3.2 What factors drive country progress?  3.3 Typology to classify country progress  3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
2.1 Background to this study: confusion in the terminology 2.2 Defining the underlying terminology for the study: components of a social protection information system 2.3 Two main approaches to setting up a social protection data repository 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4 Comparing approaches 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases  2.6.2 Social registries 2.7 Social registries 2.8 Registries 2.9 Social registries 2.1 Social registries 2.1 Social registries 2.2 Social registries 2.3 Social registries 2.4 Comparing approaches 2.5 Unpacking the registries 2.6 Social registries 2.7 Social registries 2.8 Social registries 2.9 Social registries 2.9 Social registries 2.1 Social registries 2.2 Social registries 2.2 Social registries 2.3 Social registries 2.4 Comparing protection information 2.5 Unpacking the registries 2.6 Social registries 2.7 Social registries 2.8 Social registries 2.9 Social registries 2.9 Social registries 2.1 Social registries 2.1 Social registries 2.2 Social registries 2.2 Social registries 2.3 Social registries 2.4 Comparing approaches 3. Social registries 3. Social r
2.2 Defining the underlying terminology for the study: components of a social protection information system 2.3 Two main approaches to setting up a social protection data repository 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4 Comparing approaches 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases  2.1  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
2.3 Two main approaches to setting up a social protection data repository 2.3.1 Integrated beneficiary registries 2.3.2 Social registries 2.4 Comparing approaches 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
2.3.1 Integrated beneficiary registries 2.3.2 Social registries 11 2.4 Comparing approaches 2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 17 3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
2.3.2 Social registries  2.4 Comparing approaches  2.4.1 Evolving nature and differing operationalisation  2.4.2 Types of integration enabled  2.4.3 How country context and needs affect choices  2.4.4 How different solutions compare to a country's total and 'eligible' population  2.5 Unpacking the role of the software application  2.5.1 Dynamic link to other databases  17  3. BRIEF OVERVIEW OF COUNTRY PROGRESS  3.1 Comparing progress across countries  3.2 What factors drive country progress?  3.3 Typology to classify country progress  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases  17  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
2.4.1 Evolving nature and differing operationalisation 2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases  17  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 21 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.6  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
2.4.2 Types of integration enabled 2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases 17  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 2.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.6  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
2.4.3 How country context and needs affect choices 2.4.4 How different solutions compare to a country's total and 'eligible' population 2.5 Unpacking the role of the software application 2.5.1 Dynamic link to other databases  17  3. BRIEF OVERVIEW OF COUNTRY PROGRESS 21 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
2.4.4 How different solutions compare to a country's total and 'eligible' population  2.5 Unpacking the role of the software application  2.5.1 Dynamic link to other databases  17  3. BRIEF OVERVIEW OF COUNTRY PROGRESS  2.1  3.1 Comparing progress across countries  3.2 What factors drive country progress?  3.3 Typology to classify country progress  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS  3.9
<ul> <li>2.5 Unpacking the role of the software application     2.5.1 Dynamic link to other databases     17 </li> <li>3. BRIEF OVERVIEW OF COUNTRY PROGRESS     3.1 Comparing progress across countries     3.2 What factors drive country progress?     3.3 Typology to classify country progress     3.4 MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS     3.9</li> </ul>
2.5.1 Dynamic link to other databases  3. BRIEF OVERVIEW OF COUNTRY PROGRESS  3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS
3. BRIEF OVERVIEW OF COUNTRY PROGRESS  2.1 3.1 Comparing progress across countries 3.2 What factors drive country progress? 3.3 Typology to classify country progress  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS  3.9
3.1 Comparing progress across countries  3.2 What factors drive country progress?  3.3 Typology to classify country progress  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS  39
3.2 What factors drive country progress? 3.3 Typology to classify country progress 3.6  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 3.9
3.3 Typology to classify country progress  4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS  39
4. MAIN STEPS AND CHALLENGES IN DESIGNING AND IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS  39
IMPLEMENTING SOCIAL PROTECTION INFORMATION SYSTEMS 39
4.1 Administrative and institutional aspects 39
•
4.1.1 Governance and institutional arrangements 39
4.1.2 Decentralisation: an added layer of complexity?  4.1.2 Staff availability and a situ topic in and a starting.
4.1.3 Staff availability, capacity, training and retention 4.2 Constituted and implementation associated.
<ul><li>4.2 Operational and implementation aspects</li><li>4.2.1 Collecting data (intake and registration)</li><li>42</li></ul>
4.2.1 Collecting data (intake and registration)  4.2.2 Updating data  46
4.2.3 Transforming data into information 47
4.2.4 Linking databases: need for a unique identifier 48
4.2.5 Integrating operations and services 51
4.2.6 Using data for determining eligibility 53
4.2.7 Using data for emergency response 54

4.3	4.3 Technological requirements				
	4.3.1 Information privacy, back-up and security	55			
	4.3.2 Developing and updating the tailored software application	56			
	4.3.3 Hardware infrastructure	57			
	4.3.4 Architecture and transfer of information	57			
4.4	Costs, financing and political support	58			
 5.	LESSONS LEARNED AND CONCLUSIONS	61			
5.1	Advantages of integration and related challenges	61			
5.2	Key lessons emerging from the literature	65			
	5.2.1 Policy	65			
	5.2.2 Implementation	66			
5.3	Conclusion: factors to consider when setting up an integrated system for information management	67			
6.	BILIOGRAPHY	69			
ANNEX 1 CASE STUDIES					
Cas	Case study 1: Brazil				
	Case study 2: Chile				
	Case study 3: Indonesia Case study 4: Kenya Case study 5: Turkey				
AN	ANNEX 2 QUESTION CHECKLIST: NEEDS ASSESSMENT AND FEASIBILITY STUDY				

Tables		
Table 1	What type of integration can be achieved? Comparing social registries and integrated	
	beneficiary registries	1
Table 2	How variations in operationalisation can affect outcomes	9
Table 3	What type of integration can be achieved? Comparing social registries and integrated	
	beneficiary registries	15
Table 4	How context and needs affect choices	15
Table 5	Advantages of data flow from/to the social registry for selected stakeholders	17
Table 6	List of countries that have developed or are developing 'integrated' social protection	
	information systems	22
Table 7	Selected country experiences, a comparison table	28
Table 8	Relative advantages and disadvantages of survey, on-demand and data-sharing data collection	
	approaches	44
Table 9	The opportunities and challenges of linking a national ID number to social protection provision	49
Table 10	Potential advantages and related challenges of integrating information management	61
Table 11	When is the development of an integrated social protection information system most feasible?	67
Table 12	Institutional roles and responsibilities for updating the Single Registry	95
Table 13	Information kept within the Single Registry	96
Table 14	Approaches to data collection and updating	97
Table 15	Timeline for development of key ISAS modules	102
Figures		
Figure 1	Visualising different approaches to data integration	14
Figure 2	How different solutions compare to a country's total and 'eligible' population	16
Figure 3	Full integration of data and information management	19
Figure 4	Number of programs served, selected registries	24
Figure 5	Percentage of population covered, selected systems	25
Figure 6	Number of households registered, selected registries	26
Figure 7	Typology: breadth and depth of data and information integration	37
Figure 8	Example of Chile's geo-referenced reporting system	48
Figure 9	Potential policy advantages and examples of necessary conditions	64
Figure 10	Potential operational advantages and examples of necessary conditions	64
Figure 11	Overall structure of Brazil's Cadastro Único	78
Figure 12	Chile's RSH: overall structure	84
Figure 13	Chile's RSH, available online	85
Figure 14	Overall structure of the UDB	89
_	Sample of UDB online data	91
_	Programs that form Kenya's Single Registry	94
	Sample of Single Registry summary statistics	99
Figure 18	Overall structure of ISAS	105

### **ABBREVIATIONS**

APSP	Africa Platform for Social Protection	NSNP	National Safety Net Programme, Kenya
BISP	Benazir Income Support Programme,	ODA	on-demand application
	Pakistan	OECD	Organisation for Economic Co-operation
BPS	National Statistics Agency, Indonesia		and Development
Caixa	Caixa Econômica Federal, Brazil	OPM	Oxford Policy Management
	(operating agent of Cadastro Único	OPTC	Old Persons Cash Transfer, Kenya
	(Unified Registry))	OVC	Orphans and Vulnerable Children
CD	compact disk		Programme, Kenya
CDCP	Citizens Damage Compensation	PBF	Programa Bolsa Família (Bolsa Família
	Program, Pakistan	PKH	Program), Brazil Program Keluarga Harapan (Family Hope
CECAD	Information Consultation, Selection and Extraction Tool, Brazil		Program), Indonesia
CT-OVC	Orphans and Vulnerable Children	PPLS	Pendataan Program Perlindungan Sosial
	Programme, Kenya		(Data Collection for Social Protection
DFAT	Department of Foreign Affairs and		Programs), Indonesia
	Trade, Australia	PUSDATIN	Data Centre, Ministry of Social Affairs,
DFID	Department for International		Indonesia
	Development, United Kingdom	PwSD-CT	Persons with Severe Disability
DSD	Department of Social Development,		Programme Cash Transfer, Kenya
	Kenya	RASKIN	Beras untuk Rumah Tangga Miskin (Rice
FPS	Ficha de Protección Social (social		for the Poor), Indonesia
	protection form), Chile	RSH	Registro Social de Hogares (Social
GIS	geographic information system		Registry of Households), Chile
HSNP	Hunger Safety Net Programme, Kenya	SASSA	South Africa Social Security Agency
ICT	information and communications	SIIAS	Sistema de Información Integrada
	technology		del Área Social (Social Integrated
ID	identification		Information System), Uruguay
ILO	International Labour Organization	SIIS	Sistema Integrado de Información Social
ISAS	Integrated Social Assistance Information		(Social Integrated Information System),
	System, Turkey	CICDEN	Chile
ISMS	information security management	SISBEN	Sistema de Identificación de
	system		Beneficiarios de Subsidios Sociales
ISO	International Organization for		(System to Identify Beneficiaries of
	Standardization	SOCPEN	Social Subsidies), Colombia
IT	information technology		Social Pension System, South Africa
M&E	monitoring and evaluation	SITA	State Information Technology Agency, South Africa
MDS	Ministerio do Desenvolvimento Social	TNP2K	Tim National Percepatan
	(Ministry of Social Development and	INPZN	Penanggulangan Kemiskinan (National
	Fight Against Hunger), Brazil		Team for the Acceleration of Poverty
MIDEPLAN	Ministerio de Planificación y		Reduction), Indonesia
	Cooperación (Ministry of Planning and	UDB	Unified Database, Indonesia
A 416	Cooperation), Chile	UNICEF	United Database, Indonesia United Nations Children's Fund
MIS	management information system	UPSPK	Unit Penetapan Sasaran
MOSA	Ministry of Social Affairs, Indonesia	01 31 10	Penanggulangan Kemiskinan (Unit for
NADRA	National Database and Registration Authority, Pakistan		Targeting and Poverty Reduction),
NGO	non-government organisation		Indonesia
NISIS	National Integrated Social Information	WFP	World Food Programme
כוכווי	System, South Africa	WWP	World Without Poverty
	System, South Africa		,

### **EXECUTIVE SUMMARY**

Given the ever-increasing focus on coordinating and harmonising social protection programs, aiming for a systems approach, countries have been exploring new ways to integrate data and better handle information, to ensure that the right people are receiving the right transfer amounts at the right time. This report attempts to address recent evolutions in this fast-paced field — including shifts in terminology and innovative best practice — and provides practical guidance for policymakers and practitioners grappling with the issue. The findings are based on a literature review of academic and grey literature on the topic; on extensive interviews and discussions with key informants; and on five in-depth case studies (Brazil, Chile, Indonesia, Kenya and Turkey). It updates the seminal publication on this topic (Barca and Chirchir, 2014). The main findings include the following:

- » Developing a social protection information system one that enables the flow and management of information within the social protection sector and sometimes beyond can ensure a more equitable, responsive and inclusive distribution of resources while also increasing efficiency and effectiveness of delivery and, most importantly, better serving citizens (see Section 1.1).
- » However, several trade-offs, challenges and risks can emerge when embarking on such a process which need to be carefully managed and addressed from the outset. These can include increasing costs and complexity, risks to data privacy and security, and risks of multiple exclusion from all social sector schemes.
- » Moreover, the extent to which the benefits of information integration are felt greatly depends on the practical set-up for integration and on the ultimate use and quality of the integrated system. See Section 2.2.
- » These opportunities and challenges are determined by country-specific objectives, as well as institutional, operational and technological considerations, which in turn determine the specific approach to integration. Depending on these, international best practice may not be appropriate in every instance. In fact, integrating data and information may not always be a social protection policy priority.
- » Two main (and overlapping) approaches to setting up an integrated data repository for the social protection sector can be adopted by countries: integrated beneficiary registries (integrate information from existing program management information systems (MISs) to house comprehensive information on beneficiaries); and social registries (centralise collection and housing of data on potential beneficiaries to integrate the approach to registration and eligibility determination). Social registries can also be operationalised as 'virtual' social registries (collect data by ensuring interoperability of existing administrative databases through web service access). See sections 2.3 and 2.4.
- » Each of these approaches has advantages and disadvantages, and can help to achieve different objectives of integration depending on their ultimate set-up. Table 1 summarises these.

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

	Social registries	Integrated beneficiary registries
M&E and overview of beneficiaries across programs	Only if registry receives data from program MISs	Yes
Integrated process for eligibility determination across programs	Yes	No (eligibility is determined at program level, then integrated)
Integrating operations and services across existing programs	Only if registry receives data from program MISs	Yes (if pursued as policy objective)
Integrating policy across social protection sector	Only if registry is linked to all social assistance programs, social insurance etc.	Only if registry is linked to all social assistance programs, social insurance etc.
Integration with other sector MISs	Only if application software enables this	Only if application software enables this

- » No matter which approach to setting up the data repository is selected, its full potential as an information system is only unleashed when it is used together with a software application that links it dynamically to other databases, systematically transforms data into information, and analyses and uses the information. For example, a system that guarantees full integration within the social protection sector and beyond, in accordance with the right to privacy, would establish a direct (web service) link e.g. using each citizen's national ID number as a unique identifier to (a) all social assistance program MISs; (b) social insurance MISs; (c) any other relevant government MIS. See Section 2.5.
- » An ever-increasing number of low- and middle-income countries is embarking on this process of integration, with different forms of social protection information systems already fully institutionalised in 30 low- and middle-income countries worldwide. Many of these are set up as social registries. An additional 31 countries are in the process of developing such systems. These integrated systems range greatly in their set-up, size, functions and levels of cross-sectoral integration. What matters is not their official name (which varies widely), but what they are set up to do: where the data is flowing to and from. See Section 3.
- » When integrating information management in practice, a wide range of aspects need to be considered in order to develop a functional system, ranging across four pillars: policy and budget (e.g. whether investments are justified); administrative and institutional aspects (e.g. ideal institutional set up); operational and implementation aspects (e.g. how data should be collected, updated, linked and used); and technological aspects (e.g. hardware, software and data transfer). See Section 4.
- » Several lessons can be drawn from countries' experience of developing social protection information systems to date. Most importantly:
  - Integration is mainly a policy issue requiring political and institutional arrangements rather than technical
    'fixes'. Successfully implementing such systems requires strong political commitment to integration within
    the social protection sector and beyond, as well as careful assessment of the country context and possible
    costs and trade-offs of centralising data and information management primarily privacy concerns
  - The policy drive towards integration has been very often dominated by a focus on consolidating targeting (registration and determination of eligibility) across several programs. While pursuing these objectives has been effective in several countries, it could be important to recognise the potential downsides of this approach and shift the main focus of integration towards better serving a country's poorest and most vulnerable citizens throughout their life cycle.

## 1. INTRODUCTION AND SETTING THE SCENE

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

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

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

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

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

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

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

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

<sup>2</sup> See www.opml.co.uk/publications/news/workshop-integrated-data-and-information-management-social-protection-bridging for more details and workshop materials.

The online community www.socialprotection.org/connect/communities/social-registries-and-integrated-miss-social-protection provides a platform for members to learn from each other's experiences of designing and implementing social registries and integrated management information systems that support the delivery of social protection programs.

## 1.1 Why is integrated information management for social protection important?

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

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

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

- » apply a potentially more equitable approach to distributing resources based on objective and comparable information, addressing the uneven and unequal provision of social protection across social groups and administrative jurisdictions
- » increase responsiveness and inclusiveness of interventions to serve the chronically poor, serve those who are structurally vulnerable to poverty, and respond to individual shocks (e.g. job loss, disability, childbearing or old age) or large crises (e.g. natural disaster or conflict)
- » ensure universal coverage and support implementation of the social protection floor (nationally defined sets of basic social security guarantees), potentially coordinating social assistance and social insurance
- » build a stronger link to complementary institutional frameworks and wider social and economic policies<sup>4</sup>
- » increase transparency and accountability, since program information can be more easily shared and compared
- » improve the 'image' of the social protection system, as citizens better understand their entitlements
- » increase knowledge about poverty and vulnerability based on access to the large amount of information available.

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

- » facilitate oversight of multiple schemes and reporting to policymakers
- » improve budget planning and ability to model and test policy changes
- » decrease the burden on staff (e.g. less paperwork, less manual reporting)
- » decrease the burden on potential applicants (e.g. ability to apply for several programs at once, need for fewer documents, better / more coordinated information on entitlements)
- » avoid duplication of effort (e.g. with data collection activities) and potentially establish a 'common entry point' for social protection
- » establish common systems across all schemes (e.g. payment system, grievance mechanisms), increasing efficiency and saving money
- » better manage error and fraud and monitor multiple payments (keeping track of who is receiving what)
- » further digitalise service delivery, potentially reaching out to citizens in new ways (e.g. mobile phones)
- » enable beneficiaries to transition between schemes as their circumstances change
- » establish more effective emergency responses (e.g. by directing additional payments to social protection recipients in areas affected by an emergency for a limited period)<sup>5</sup> and context-based services.

<sup>4 &#</sup>x27;SP systems have the potential for maximizing outcomes and impacts if they are conceived as integral components of national development and poverty reduction strategies, linked with complementary programs (e.g.: livelihood promotion, labour market and intermediation programs, food security programs, etc.) and macro policy determinants (macroeconomic stability, economic growth, etc.).' Organisation for Economic Co-operation and Development (OECD) 2009.

<sup>5</sup> For example, see Kenya's Hunger Safety Net Programme (HSNP) Phase 2 and Pakistan's CDCP program. For more discussion on this topic see the comprehensive literature review at social-protection.org/connect/communities/social-registries-and-integrated-miss-social-protection (Oxford Policy Management 2016). See also Section 4.2.7 and Box 11 on Pakistan.

Potentially, the greater the interconnectivity the greater the gains in efficiency and effectiveness of service delivery. The key issue is therefore the level of coordination and interoperability<sup>6</sup> achieved, not the creation of a super-sized system or database that serves all purposes.<sup>7</sup>

However, several challenges and risks can emerge when embarking on such a process of data integration within the social sectors. These are discussed in depth in Section 4. They include:

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

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

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

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

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

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

### 1.2.1 Providing coordination and oversight

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

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

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

<sup>8</sup> This does not imply that other objectives are not valued by the proponents of one or the other; they may simply be given less priority.

In practice, unless data flows back from program MISs to the integrated system, such an overview is not always possible (see Table 3 for example).

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

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

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

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

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

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

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

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

### 1.2.3 Integrating and coordinating operations and services

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

According to proponents, integration should be focused on:

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

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