Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC)

COMCEC

Effective Social Assistance Provision and Socioeconomic Empowerment in light of COVID-19 Pandemic in the OIC Member Countries: Integrated Monitoring and Information Systems

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TABLE OF CONTENTS

List of Tables i

List of Figures ii

List of Acronyms iii

EXECUTIVE SUMMARY v

1. INTRODUCTION ***1***

1.1 Objectives and methodology 1

1.2 Social protection across the world 1

1.3 COVID-19 pandemic and social assistance in OIC 4

1.4 Social protection and integrated information systems 10

1.5 Better targeting, efficient implementation, and integration 12

2. PILLARS OF INTEGRATED INFORMATION SYSTEMS FOR SOCIAL PROTECTION ***15***

2.1 Definitions and Concepts 15

2.2 Role of integrated information systems during the process of social assistance 18

Outreach, intake, and assessment: where Social Registry is the most useful 19

Enrolment: Towards the integrated beneficiary system 22

Social assistance provision 24

Management of social protection systems, dynamic inclusion, and updating 26

Software application connecting phases 27

2.3 Investing in administrative data collection matters 28

2.4 Advantages and Challenges 29

3. INTERNATIONAL AND OIC EXPERIENCE WITH INTEGRATED SOCIAL ASSISTANCE SYSTEMS ***31***

3.1 Growing need for social protection and MIS 31

3.2 International best practices 34

3.3 Structure of social assistance systems in OIC countries 35

4. CASE STUDIES ***43***

4.1 Selection of Case Countries and Methodology 43

4.2 Case Study 1: Türkiye 45

Türkiye: Social assistance at a glance 45

Türkiye's Integrated Social Assistance System (ISAS) 46

How Does the Integrated Social Assistance System Work? 48

Technological Infrastructure 52
Success Factors and Challenges 53

4.3 Case Study 2: Indonesia **57**
Indonesia: Social Assistance at a Glance 57
Indonesia's Uniform Database on Social Welfare (UDB) 59
How Does UDB Work? 65
Challenges 65

4.4 Case Study 3: Sudan **67**
Country Background 67
Sudan's National Development Strategy through the Lens of Social Protection 67
Sudanese Definition of Social Protection 69
Leading Institutions Related to Social Protection and Provision in the Sudanese Government 70
Added Perspective on Administrative Records, Monitoring, and Evaluation 72

4.5 Case Study 4: Tunisia **75**
Tunisian Social Assistance System at a Glance 75
Tunisia's Integrated Social Assistance System 77
Challenges for Building a Fully Integrated System 79

5. GUIDE FOR DEVELOPING AN INTEGRATED INFORMATION SYSTEM FOR SOCIAL PROTECTION ***81***

5.1 Universal principles for building an efficient social protection system **81**

5.2 Conceptual framework for change in social protection **83**

5.3 Suggested workflow **85**
Initial question set 85
Broader workflow 87

5.4 Suggested concrete pathways for different categories of OIC members **88**
Typology 1: Multiple social programs with low-level interoperability 89
Typology 2: Multiple programs with high-level interoperability 90
Typology 3: High level of integration, social registry 91

6. CONCLUSION ***93***

References **97**

Data Appendix **103**

List of Tables

Table 1 Factors that determine individuals' paths towards integrated social protection 12
Table 2 Benefits of integrated social protection systems 14
Table 3 Main definitions 16
Table 4 Classification of OIC members according to integration scores 41
Table 5 Türkiye's social assistance programs 49
Table 6 Types of existing social assistance programs in Türkiye 50
Table 7 Institutions integrated into Social Assistance in Türkiye 55
Table 8 Social protection programs, coverage, and expenditures in Indonesia, 2017 60
Table 9 Use of Unified Database vis-à-vis COVID-19 non-contributory social protection measures (UN-ESCAP) 62
Table 10 Social service cluster results framework in Sudan 69
Table 11 Basic social protection policies in Sudan 70
Table 12 Social Assistance in Tunisia 76
Table 13 Survey for initial evaluation 85

List of Figures

Figure 1 Social assistance coverage by region 2
Figure 2 Social protection adequacy and benefits per capita by region 3
Figure 3 Coverage and adequacy of social assistance for OIC countries 3
Figure 4 Overview of social protection measures across OIC members 8
Figure 5 COVID-19 Government Policy Response Index 9
Figure 6 COVID-19 Economic Support Index 9
Figure 7 Main stages of the social assistance delivery chain 19
Figure 8 Outreach, registration, and assessment 20
Figure 9 From eligibility to onboarding 24
Figure 10 Management and updating of existing programs 27
Figure 11 Number of OIC members with essential components of an integrated social assistance system 38
Figure 12 Year when policy actions for an integrated system started 39
Figure 13 Reported barriers against moving to integrated systems 40
Figure 14 Modules and phases of Türkiye's ISAS 56
Figure 15 Structure of the social protection system in Indonesia 64
Figure 16 Structure of UBD 66
Figure 17 Pillars of social assistance in Tunisia 78
Figure 18 Key dependencies for an integrated information system for social protection 84
Figure 19 Overall workflow for system development 87

List of Acronyms

ADB	Asian Development Bank
AEs	Advanced Economies
BSM	Bantuan Siswa Miskin- Cash Transfers for Poor Students of Indonesia
CCO	COMCEC Coordination Office
CGC	Caisse Générale de Compensation
CNI	National Center for Informatics, Tunisia
CNRPS	Caisse Nationale de Retraite et de Prévoyance Sociale
CNSS	Caisse Nationale de Sécurité Sociale
COMCEC	Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation
COVID-19	Coronavirus Disease 2019
DHIS	District Health Information System
DKI	Daerah Khusus Ibukota
DTKS	Data Terpadu Kesejahteraan Sosial-Indonesia's Unified Data Base
EMIS	Education Management Information System
FAO	Geographic Information System
GCC	Gulf Cooperation Countries
GD	General Directorate
GDP	Gross Domestic Product
GIS	Food and Agriculture Organization
HDI	Human Development Index
ILO	International Labor Organization
IMF	International Monetary Fund
IMF	International Monetary Fund
ISAS	Integrated Social Assistance Information System
ISKUR	Turkish Employment Agency
JAMKESMAS	Public Health Insurance Program of Indonesia
JHU CSSE	Johns Hopkins University Center for Systems Science and Engineering
KUR	Kredit Usaha Rakyat -Credit for Businesses Program of Indonesia
LFPR	Labor Force Participation Rate
LICs	Low-Income Countries
MDGs	Millenium Development Goals
MENA	The Middle East and North Africa
MERNIS	Merkezi Nüfus İdare Sistemi-Central Civil Registration System
MINEPAT	Ministry of Economy, Planning and Regional Development
MINFI	Ministry of Finance
MIS	Management Information System
MoE	Ministry of Education
MoFSS	Ministry of Family and Social Services
MoH	Ministry of Health
MoSA	Ministry of Social Affairs
NDS	National Development Strategy
NHIF	National Health Insurance Fund
OECD	Organization for Economic Cooperation and Development
OIC	Organization of Islamic Cooperation
OxCGRT	The Oxford COVID-19 Government Response Tracker
PKH	Program Keluarga Harapan – Conditional Cash Transfer Programme for Poor Families
PMT	Proxy Means Test
PNAFN	Programme National Aux Familles Nécessiteuses
PNPM	National Programme for Community Empowerment
PPLS	Data Collection for Social Protection Programmes

PROSPERA	Australia-Indonesia Partnership for Economic Development
PTT	Postal and Telegraph Services Corporation
PUSDATIN	Pusat Data dan Informasi Kementerian Kesehatan Indonesia
SAIS	Social Assistance Information System
SASEF	Social Assistance and Solidarity Encouragement Fund
SASF	Social Assistance and Solidarity Foundations
SILC	Statistics on Income and Living Conditions
SIP	Social Initiatives Program
SSD	South Sudan Development Plan
SSHHS	South Sudan Household Health Survey.
TNP2K	Tim Nasional Percepatan Penanggulangan Kemiskinan, National Team for the Acceleration of Poverty Reduction of Indonesia
UDB	Unified Database
UN	United Nations
UNDP	United Nations Development Program
UNESCWA	United Nations Economic and Social Commission for Western Asia
VOIP	Voice Over Internet Protocol
VPN	Virtual Private Network
WEO	World Economic Outlook
WFP	World Food Program
WHO	World Health Organization

EXECUTIVE SUMMARY

Social assistance programs are crucial tools for governments to level the field for their citizens and respond to the needs of the vulnerable population. The outbreak of the COVID-19 pandemic has so far resulted in a total of 6.5 million deaths, and it erased several years of efforts in poverty alleviation. According to the World Bank (2022) projections, the number of people living in extreme poverty in 2022 is expected to lie between 657 million and 676 million. While the economic contraction due to the COVID-19 has been relatively slower in the OIC region, the impact on poverty has been drastic. The COVID-19 pandemic has led to an increase of more than 13 million poor people in OIC countries from 2019 to 2021, while at the same time, more than 60 million people in 11 OIC member states have been facing hunger due to the pandemic. Despite this background, the policy response has been slower among the OIC members than in the rest of the world.

With the outbreak of the COVID-19 pandemic, governments all over the world have learned the hard way that they can no longer afford to stick to traditional cumbersome social assistance provision methods as before. With climate change and global warming at alarming levels, natural disasters at a higher frequency and catastrophe levels are expected worldwide. Governments need flexible and fast social assistance delivery systems to respond to sudden shocks. Given the current speed of technology, the most promising method to increase the effectiveness of social assistance programs is to move to integrated monitoring and information systems in social assistance delivery. Integrated systems offer higher inclusion and coverage, efficiency and accountability, and accuracy in social assistance databases, as they help reduce financial and time-related costs, alleviate the burden on citizens and government officials, reduce errors, omissions and duplications through digitalization and limit the scope for fraud. Fully integrated systems are also living systems. They can provide real-time information across different sectors at highly granular levels and tremendous opportunities for evidence-based policymaking. The advantages of integrated information systems for social protection are evident. Still, each country will follow its way to establish such systems while relying on the lessons from the experiences of best practices and failures we observe in other countries.

This report shows that the experience with integrated monitoring systems has been mixed among the OIC members. We have collected data on the levels of social protection integration for 28 OIC member countries for which information is available. Some member countries, such

as Azerbaijan, Turkey, Uzbekistan, and Qatar, have very high integration and interoperability of social assistance delivery. Other countries such as the United Arab Emirates, Egypt, Indonesia, Malaysia, Albania, the Islamic Republic of Iran, and Tunisia also have high levels of interoperability between the existing social programs. Still, integrated beneficiary systems are yet to exist in these countries. Uganda, Kyrgyzstan, Saudi Arabia, Bangladesh, Somalia, Jordan, Bahrain, Iraq, Libya, Sudan, and Mali have moderate to low degrees of integration. For some other members, the information does not exist, which signifies that these countries might have low degrees of integration. The integration level of social assistance programs correlates with income levels in the OIC region, but this trend is not specific to the OIC. The degree of integration is also higher for wealthier members of the European Union in comparison to the EU member countries with less than average income per capita.

The four case studies (Indonesia, Sudan, Tunisia, and Turkey) we present in this report provide valuable information on how countries start from low degrees of integration and under what circumstances they can move to systems with higher degrees of integration with the use of information systems. A common pattern is that political commitment and coordination are critical initial success factors. Another crucial factor relates to the importance of digitalizing social registries and introducing unique identity numbers for all citizens. Providing government services through online platforms such as e-government platforms can help accelerate integration. Finally, the case studies show that moving to integrated systems is insufficient, but maintaining their consistency and security are just as crucial.

We argue that creating integrated information systems is not solely a technical issue; instead, they require an innovative re-constellation of institutional and organizational structures. From outreach and intake to the provision of social assistance, the information systems promise to increase efficiency, accuracy, and reliability. Yet, developing such systems requires the creation of data ecosystems, which require a well-grounded understanding of the weaknesses and strengths of existing systems. Dynamic inclusion and coordination are thus the critical challenges the policymakers face with.

Based on the collected data and case studies, we present a three-tiered guide in the final section of this report. First, we provide universal principles of the successful reform of social assistance systems, informed by case studies and the accumulated literature on the social assistance systems of other countries. These principles are not concrete suggestions but mental guides that

can be useful throughout all stages of system reform. Second, we provide a conceptual model of change in social assistance systems inspired by the recent COVID-19 crisis. The worldwide health crisis not only put millions of additional people in poverty but also ironically pushed policymakers toward the institutionalization and digitization of social assistance programs and vertical and horizontal integration.

Finally, based on the country typologies that we assess out of the experience of OIC countries, we suggest three different pathways to move towards integrated information systems for social protection. Countries with multiple programs and a low level of interoperability need to strengthen the interconnectedness between the programs via tools such as single registry platforms and single payment systems. They can use their resources best by investing in interoperability platforms, a step toward fully integrated systems. However, we suggest that countries with moderate to high levels of interoperability move thoroughly toward an integrated beneficiary system, ideally with the help of social registries. Also, such integrated platforms should connect the social assistance databases with additional official data sources, such as civil registries, tax records, and income data, which are essential at the assessment stage, registration, and data updates. Finally, we envision that the countries with an already high level of integration can move towards developing dynamic, inclusive, and adaptive systems with intelligent tools such as early poverty warning, risk assessment, and extending outreach to the most vulnerable groups, such as the employees in the informal sector. All in all, the concrete paths of the development of information systems are driven by policy objectives, initial institutional setup, and country context. Our guide aims to underline the common patterns as well as the uniqueness of each country.

1. INTRODUCTION

1.1 Objectives and methodology

This report aims to help the Organization of Islamic Cooperation (OIC) member countries improve the effectiveness of the social assistance delivery systems in light of the COVID-19 pandemic. We aim to achieve this goal in several steps. We first document how the pandemic affected the OIC member countries and how the government policies have responded. We then provide a detailed discussion of what integrated monitoring and information are and how they help governments improve the effectiveness of social assistance programs based on the existing international evidence. One of the key contributions of this report is that we provide a thorough analysis of the degree of integration in social assistance delivery based on an online survey that we conducted with the OIC members, complemented with desk research. Based on the information provided by the member countries and desk research, we evaluate the degree of integration through simple scores and compare members' performance. We also analyze the key barriers that limit members' ability to move to a higher degree of integration. We complement our analyses with four case studies explaining the experience of Indonesia, Sudan, Tunisia, and Turkey in detail. We rely on face-to-face interviews and desk research to gather information and convey the experience of these four member countries. This report provides a guide for member countries explaining the requirements and building blocks for integrated social assistance programs. The levels of technology adoption and resources vary significantly across member countries. Hence, the guide section in this report carefully considers these differences and aims to provide recommendations based on their exact needs.

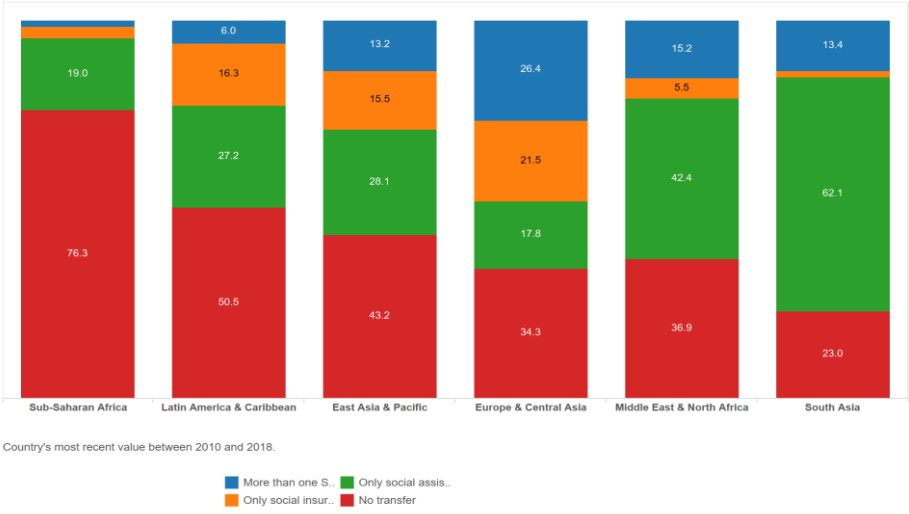
1.2 Social protection across the world

The population coverage of social protection by region for 2010-2020 (World Bank Social Protection Data- WB henceforth).[1] The WB defines social protection coverage as the share of the population participating in social protection or labor programs, including direct and indirect beneficiaries. The social assistance coverage only is most significant in South Asia, followed by

[1] WB Social Protection Database can be found on https://www.worldbank.org/en/data/datatopics/aspire

MENA, Latin America & Caribbean, East Asia, and the Pacific (***Figure 1***). There is a trade-off between only social assistance and social insurance coverage, as the regions with more comprehensive social insurance have smaller coverage of social assistance. In particular, the MENA region has small social insurance coverage, and around one-third of the population does not benefit from any transfer.

Figure 1 Social assistance coverage by region



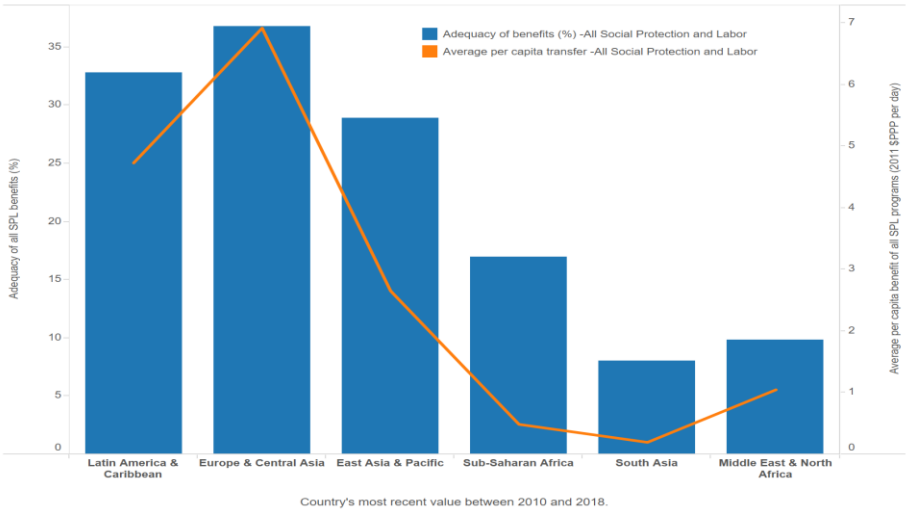
Source: World Bank Social Protection Dataset

The social protection coverage remains at a reasonable level for the MENA region. The average per capita benefits and the adequacy of the benefits are among the lowest among all regions (***Figure 2***).[2] Therefore, we conclude that while a large share of the population has access to social assistance, the level of benefits is not satisfactory in the MENA region by international standards. By the type of social protection, MENA regions seem to depend on cash transfers predominantly. For instance, East Asia has a more diverse assistance portfolio, including conditional cash transfers and social pensions. From this perspective, the MENA region stands close to the average characteristics of the lower-middle-income countries, characterized by extensive access to social protection and a low level of adequacy. By contrast, low-income countries have deficient coverage and low adequacy, and upper-middle-income countries have

[2] Adequacy of benefits is defined by the total transfer amount received by all beneficiaries in a quintile as a share of total welfare of beneficiaries in that quintile.

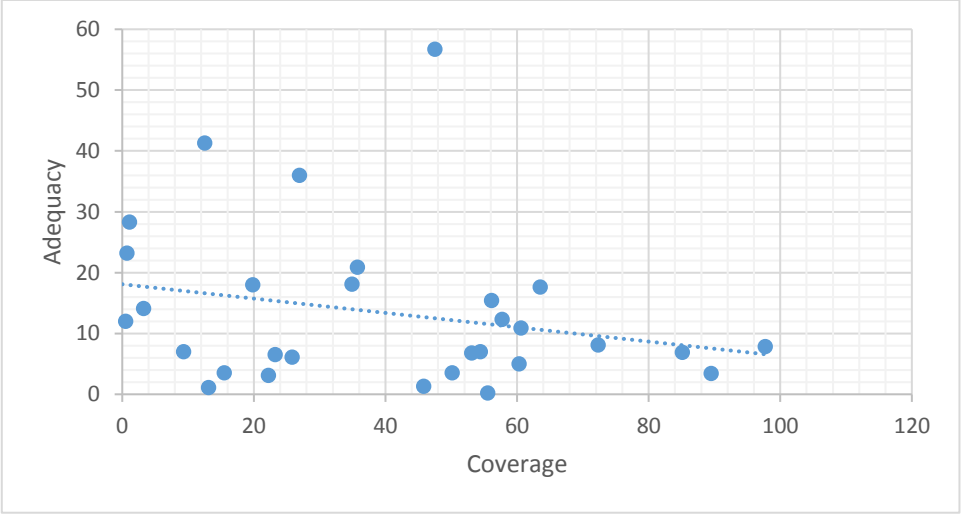
a comparable level of coverage with higher adequacy. Another point of dissimilarity between MENA and upper-middle-income countries is that the MENA region has a more minor role in social insurance than social protection only.

Figure 2 Social protection adequacy and benefits per capita by region



Source: World Bank Social Protection Dataset

Figure 3 Coverage and adequacy of social assistance for OIC countries



Source: World Bank Social Protection Dataset. The data points represent the most recent available data.

Focusing only on the member countries of OIC, the negative relationship between the coverage and adequacy of social assistance seems valid (***Figure 3***).[3] While the coverage varies between 0-100 percent, the adequacy has the range of 0-50 percent, where the larger share of the population is covered, the adequacy rate decreases, with a few outliers such as Mauritania. The implication is that if we remove a few outliers, the negative association between coverage and adequacy seems remarkably more robust, implying a trade-off between the level of assistance and the number of beneficiaries under protection. What lies behind this phenomenon should be considered for each country concerning the fiscal capacity, incidence of poverty, demand for protection, and organizational and institutional capacity and resources to the existing protection systems available in each country.

1.3 COVID-19 pandemic and social assistance in OIC

The COVID-19 pandemic has revealed that the flexibility and speed of social assistance systems are crucial in responding to sudden shocks. The experience and policy response so far have been mixed across countries. Although developed countries responded to the pandemic at a relatively higher pace and with more substantial stimulus than the majority of the developing counties, they have not necessarily been more successful. COVID-19-related deaths per million people in the United States were recorded as 3,165; 3,054 in the United Kingdom; 2,950 in Italy; 2,236 in France; 1,166 in Canada; and 545 in Australia (JHU CSSE COVID-19 Data). On the other hand, COVID-19-related deaths per million people were recorded in some of the developing countries as follows; 576 in Indonesia; 520 in South Korea, 630 in Iraq, 237 in the United Arab Emirates, 441 in Morocco, 2,474 in Tunisia, 3,218 in Brazil, 2,556 in Mexico, 1,119 in Malaysia and 6,544 in Peru (JHU CSSE COVID-19 Data).

As the 2021 COMCEC report on COVID-19 and Its Adverse Effects on Socio-Economic Inequalities in the OIC Member States show, the primary infection and death rate trends have been different in the OIC region than in the rest of the world. The report and some of the figures provided above reveal that the number of new cases and deaths per million have been much lower in the OIC region relative to the rest of the world. These differences could reflect that infection rates might have followed a dissimilar trend across OIC members due to differences in

[3] Data are not available for Guinea, Niger, Kuwait, Saudi Arabia, Somalia and Togo. Data for the OIC members are obtained by all individual counties from the WB Social Protection Dataset.

urban population, population density in central cities, and reasons related to geography and climate. But it is also possible that the data collection capacity might be lower across OIC members, and some of the COVID-19-related death rates might have gone unrecorded. The 2021 COMCEC report also shows that OIC-Africa countries had significantly lower infection and death rates among the OIC member countries, possibly due to under-reporting problems. In contrast, the OIC-Arab and OIC-Asian regions showed a relatively stronger correlation with trends in the non-OIC countries (COMCEC, 2021).

The IMF predicts that the growth rate will be 4.4 percent in developed countries and 5.2 in developing countries after the sharp decline in 2020 (World Economic Outlook, 2021).[4] The same report also shows that the real GDP contraction in OIC economies in 2020 has been more minor at -1.6 percent. The expected growth rate for the OIC region for 2022 is 4.5 percent. According to the World Bank (2022) projections, the number of people living in extreme poverty in 2022 is expected to lie between 657 million and 676 million.[5] According to these projections, the inflationary pressures and the crisis in Ukraine are expected to add a further 75 to 95 million people to the unprecedented reversals in poverty reduction after the pandemic. While the economic contraction due to the COVID-19 has been relatively slower for the OIC members, the impact on poverty has been drastic. The COVID-19 pandemic, unfortunately, has led to an increase of more than 13 million poor people in OIC countries from 2019 to 2021 (COMCEC, 2021). The OIC General Secretariat highlighted in the 8th session of the OIC Ministerial Conference on Food Security and Agricultural Development in 2021 that the number of undernourished people in the world increased from 650 million in 2019 to 811 million in 2020. The majority of these people belong to OIC member states. Based on the World Food Program estimates, the Secretariat is alarmed that more than 60 million people in 11 OIC member states are facing hunger.[6]

The ILO's World Social Protection Report, 2020-2022, shows that as of 2020, only 46.9 percent of the global population was effectively covered by at least one social protection benefit, while the remaining 53.1 percent – corresponding to 4.1 billion people – were left wholly

[4] https://www.imf.org/en/Publications/WEO/Issues/2021/07/27/world-economic-outlook-update-july-2021
[5] The World Bank Data Blog. 2022. Pandemic, prices, and poverty. Accessed: August 5, 2022. https://blogs.worldbank.org/opendata/pandemic-prices-and-poverty
[6] The General Secretariat of the Organization of Islamic Countries https://www.oic-oci.org/topic/?t_id=30397&t_ref=19486&lan=en

unprotected.[7] As the report shows, the performance varied significantly across regions; coverage rates in Europe and Central Asia (83.9 percent) and the Americas (64.3 percent) were above the global average, while Asia and the Pacific (44.1 percent), the Arab States (40.0 percent) and Africa (17.4 percent) have lagged.

Gentilini et al. (2022) have tracked the social protection and labor measures implemented by 223 countries worldwide. That is a "real-time study" where the data is updated regularly using consistent methods for the same countries.[8] The study shows that as of January 2022, 3,856 social protection and labor measures were planned or implemented, constituting a net increase of 523 measures, or 15.6 percent, since the last update in May 2021. Using the data provided by Gentilini et al. (2022), we document in ***Figure 4*** the social protection and labor measures implemented by the OIC members. According to Gentilini et al. (2022), social assistance programs are more commonly used among OIC members than social insurance or labor market programs. Forty-eight countries across all OIC members implement a cash transfer program and utility or financial support for their citizens. In-kind transfers, such as school lunch programs, are also standard social assistance tools among the members.

On the other hand, public work programs, such as community health, sanitation, hygiene, or digitalization of public services, have been among the least commonly used tools. As for the social insurance tools, social security contribution waivers or subsidies have been the most popular tools, being implemented by almost half of the members, followed by the paid leave policies. Among the three categories of social protection, data by Gentilini et al. (2022) show that labor market policies were the least used tools during the COVID-19 pandemic. Only 17 OIC members implemented wage subsidies or training, whereas only 15 countries subsidized reduced work time. On the other hand, labor regulation adjustments, which include severance payment obligations, dismissal and hiring procedures, or leave modifications, have been the most commonly used labor market protection tools during the pandemic, being implemented by 29 member countries.

Other sources track the COVID-19-related policy response in the world. The Oxford COVID-19 Government Response Tracker (OxCGRT) collects information on countries' policy responses to

[7] ILO World Social Protection Report, 2020-2022 https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_817572.pdf
[8] Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures, Living Paper, February 2022.

help decision-makers and citizens understand governmental responses consistently, aiding efforts to fight the pandemic. The OxCGRT systematically collects data on several different common policy responses governments have taken and estimates indices to compare the performance of the countries.

While the OxCGRT provides indices for several COVID-19-related indicators, such as infection rates, death rates, and vaccination, this section focuses on the two indices estimated by the OxCGRT. The first one is the COVID-19 Government Policy Response Index. The Government Policy Response Index records information on i) containment and closure policies, such as school closures and restrictions on movement, ii) economic policies, such as income support to citizens or provision of foreign aid, iii) health system policies, such as the COVID-19 testing regime, emergency investments into healthcare and most recently, vaccination policies, and iv) vaccination policies: a country's prioritization list, eligible groups, cost of vaccination to the individual, and the presence of a vaccine mandate. Data are then aggregated into an index number between 0 and 100. The index measures the degree to which government considers the relevant measures.

In ***Figure 5***, we compare the government policy responses of the OIC members with other countries in the world and developed countries. As the figure clearly shows, the response in the OIC region has been significantly below the average. While most countries, especially the developed ones, started increasing the response in the fall of 2020 (with the second wave of the pandemic), the response across the OIC region remained flat until September 2021 and declined gradually. As of August 2022, all countries have similar levels of policy response index figures.

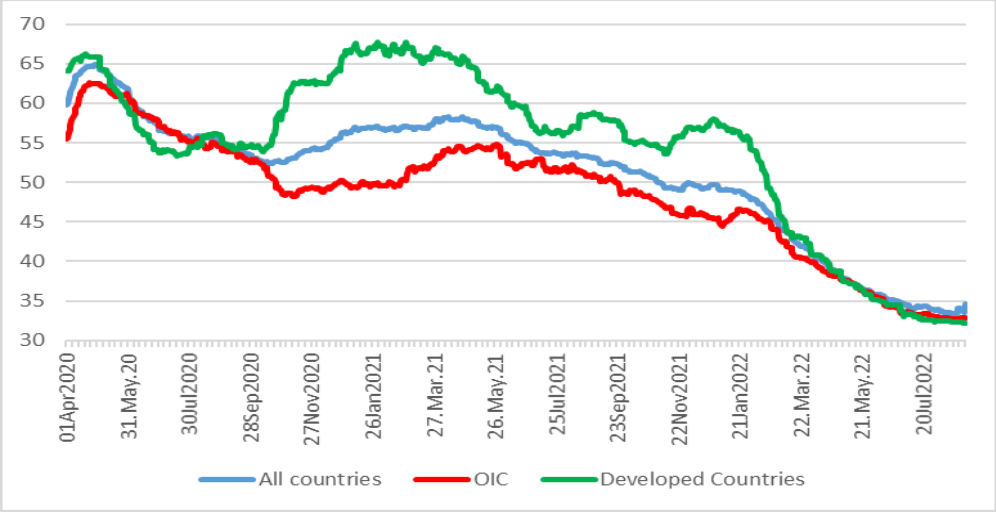
To compare the social protection in the OIC region with the rest of the world, we also explore a sub-index by the OxCGRT, the Economic Support Index. This index measures the debt relief for households and income support measures. We again compare OIC members' average economic support index with the rest of the world and developed countries. ***Figure 6*** shows that the overall government response has been lower across the OIC members, and economic support has also been well below the average. The difference between the index values of OIC members and the rest has been consistently around ten percentage points (about 25 percent lower) throughout the pandemic.

Figure 4 Overview of social protection measures across OIC members

Type	Social Assistance				Social Insurance				Labor Markets			
Country	Cash Transfer	Public Works	In Kind	Utility and Financial Support	Paid leave /unemp. support	Health Insurance Support	Pension / Disability Support	Social Security Contrib. (waiver / subsidy)	Wage Subsidy	Training	Labor Regulation Adjustment	Reduced Work Time Subsidy
Afghanistan	√		√	√			√	√		√		
Algeria	√		√	√	√	√	√	√			√	√
Azerbaijan	√	√	√	√	√		√	√	√		√	
Bahrain	√			√		√			√			
Bangladesh	√		√	√		√			√		√	
Benin	√			√					√		√	√
Brunei	√			√			√	√	√	√		
Burkina Faso	√		√	√				√			√	
Cameroon	√		√	√			√	√				
Chad			√	√								
Comoros	√			√					√			
Cote d'Ivoire	√		√	√		√				√	√	
Djibouti	√		√	√	√			√	√		√	√
Egypt	√		√		√	√	√				√	
Gabon	√		√	√					√		√	
Gambia	√		√	√								√
Guinea	√	√	√	√				√		√		
Guinea-Bis.	√	√	√	√								
Indonesia	√	√	√	√		√			√	√	√	
Iran	√		√	√	√							
Iraq	√		√	√				√				
Jordan	√	√	√	√	√	√		√	√	√	√	
Kazakhstan	√	√	√	√		√						
Kuwait	√		√		√			√	√			
Kyrgyz Rep.	√	√	√	√	√			√		√	√	√
Lebanon	√			√	√			√				
Libya			√	√								
Malaysia	√		√	√	√		√	√	√	√		
Mali	√	√	√	√						√	√	√
Mauritania	√		√	√								
Morocco	√		√	√	√	√	√	√	√		√	
Mozambique	√	√		√	√			√				√
Niger	√	√	√	√								
Nigeria	√	√	√	√					√		√	
Pakistan	√	√	√	√		√	√			√	√	√
Oman			√	√	√	√		√			√	
Qatar	√			√	√	√				√	√	
Saudi Arabia	√		√	√	√	√			√	√	√	
Senegal	√		√	√							√	√
Sierra Leone	√		√	√		√					√	
Somalia	√		√	√			√					√
Sudan	√		√								√	√
Suriname	√		√	√	√	√				√	√	
Syria	√		√	√						√	√	
Tajikistan	√		√	√	√		√	√		√		
Togo	√		√	√				√			√	√
Tunisia	√			√	√	√	√	√	√			
Turkey	√		√	√	√	√	√	√	√		√	√
Turkmenistan	√							√			√	
UAE			√	√	√	√		√		√	√	√
Uzbekistan	√	√	√	√	√	√	√			√	√	√
Yemen	√		√	√								
# of countries	48	13	43	48	21	19	14	23	17	17	29	15

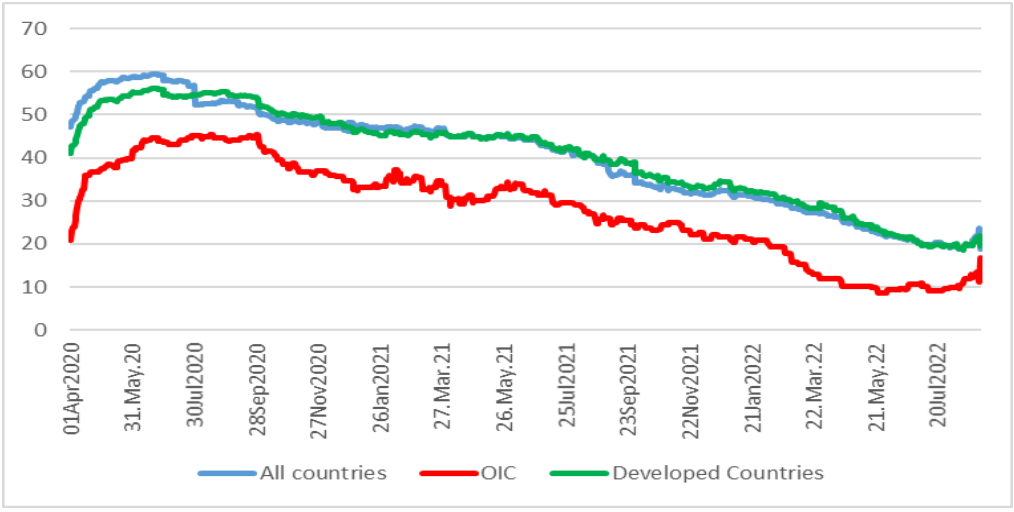
Source: Gentilini et al. 2022. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures"

Figure 5 COVID-19 Government Policy Response Index



Source: Own calculations based on Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford.

Figure 6 COVID-19 Economic Support Index



Source: Own calculations based on Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford.

Against this background, the 2021 COMCEC Poverty Alleviation Working Group has recommended; i) applying contact tracing and testing programs instead of full lockdowns, ii)

developing food safety strategies, promoting social assistance interventions, and ii) raising awareness of the importance of the measures and benefitting from information systems to ensure effective implementation of public health measures, iv) strengthening access to education, employment, and health facilities, particularly by women, youth, and unskilled workers, v) closing learning gaps through remedial educational programs, vi) mitigating internal economic imbalances, vii) increasing the scope and capacity of social protection and assistance programs by allocating more resources and supporting them with digital technologies.[9]

1.4 Social protection and integrated information systems

Integrated information systems have increasingly been adopted in recent years in many countries to implement, monitor, and evaluate social protection programs. This trend was also strong among the lower and middle-income countries that sought to expand coverage, increase efficiency, and catch up with established systems in advanced economies. In 2015, some form of the information system was already in use in around 30 mid-income countries, with 15 countries in Latin America, six in Africa, five in Europe and the Middle East, and as many countries, half of which were in Sub-Saharan Africa were considering to set up such systems.[10] These information systems, by and large, took the form of social registries, while the rest were being integrated registry systems.[11]

The range of the integrated systems in terms of setup, functions, and level of integration was quite diverse. Barca (2017) argues that the highest population coverage was achieved in the systems succeeding with high-level interoperability. For instance, in Uruguay, the administrative datasets combined with unique IDs given to each citizen led to an exceptionally high level of coverage. In Chile, another country standing out in achieving effective use of MIS in social assistance, the social registry allows it to cover all individuals. On the other hand, countries with registries based on on-demand data collection or surveys have lower coverage.

[9] COMCEC 2021 Annual Progress Report, http://ebook.comcec.org/Kutuphane/Icerik/1a422ea5-d333-49e8-8f6f-40d4babac82d.pdf
[10] Barca, V. (2017). Integrating data and information management for social protection: social registries and integrated beneficiary registries.
[11] Leite, P., George, T., Sun, C., Jones, T., & Lindert, K. (2017). Social Registries for Social Assistance and Beyond.

The evidence shows that social registries perform better than integrated registry systems in expanding population coverage.

To better understand what drives the performance of the integrated systems, it is helpful to identify the factor behind the efficient use of information systems: Policy objectives, existing social protection programs, and finally, the country context (***Table 1***). Most countries strive to create integrated systems to gain better oversight of multiple schemes and increase the efficiency of eligibility for assistance. The unexpected shocks related to the global health crisis, climate risks, and economic crisis also underline the importance of addressing the life-cycle vulnerabilities of the potential beneficiaries. Crucially, such objectives should be viable and relevant. The viability and relevance are mostly related to whether the policy goal addresses the country's context and existing social policy setup. The existing design presents opportunities and challenges to improve the system. At the same time, the country context indicates how much resources (financial, human capital, and organizational skills) can be devoted to adopting the system. The success of social assistance integration reform is essentially the outcome of these three factors.

At one extreme, policymakers' will towards integration, universal social protection, a comprehensive operational social registry, and strong central or local institutions will make it far easier to move towards integrated social assistance. Conversely, suppose the country has multiple assistance programs implemented by different organizations (at the local or national level) and on-demand data collection without a solid financial and organizational capacity. In that case, integration attempts will be more challenging to achieve meaningful targets. Most developing economies stand between two extremes: administrative capabilities are low, financial and technical ability is limited, and the integration will is not strong enough. Therefore "one-size-fits-all solutions" are doomed to fail. Instead, creating working modalities/structures that address the pressing needs of the existing social protection systems and offer realistic solutions is needed. As will be seen, the final ***section*** of the present report will suggest pathways to foster MIS-supported integration of social assistance, which is informed by our case studies and explicitly designed for developing economies.

Table 1 Factors that determine individuals' paths towards integrated social protection

Policy objectives	• Oversight of the multiple schemes • Efficiency of eligibility • Life-cycle vulnerabilities • Policy toward integration
Existing setup	• Targeted or universal social protection • Conditional or unconditional protection • Managed by the government or another entity • Level of centralization • On-demand data collection or censuses • Social registry or integrated registries • Level of coverage and adequacy • Ability to respond to shocks (the prospect of vertical and horizontal integration)
Country context	• Existence of funds to maintain and improve the system • Staff and financial capacity at the administrative level • Prospect of technological innovation • Legal framework • Political will to focus on integration

Source: Based on Barca (2017)

1.5 Better targeting, efficient implementation, and integration

One of the critical policy lessons learned during the COVID-19 pandemic was that governments must adopt the most recent technologies to act swiftly and flexibly in light of sudden shocks and natural disasters. Cumbersome systems with hierarchical structures and heavy bureaucracies miserably fail in terms of outreach to the target population and meeting the needs of the citizens on time. On the other hand, the current level of technology, which can handle and process vast amounts of information at low costs, offers significant opportunities for governments to build sound and effective national social protection systems. Integrated monitoring and information systems allow the flow of information across different institutions and sectors and help governments improve efficiency in decision-making, allocation of scarce resources, and monitoring social policy impact. As Chirchir and Barca (2020) put it, "*the ability of a country to care for its people and respond to their life-cycle needs depends on its ability to identify those who*

are in need, enroll them, provide tailored benefits and services, and follow up to cater to evolving circumstances." These actions, on the other hand, require dynamic and real-time data.

Two key pillars emerge when referring to an effective social assistance system. The first pillar is *digital systems*. Chirchir and Barca (2020) explain that an effective social protection system has to be digital because managing social protection programs naturally involves collecting, processing, storing, and using data for decision-making and supporting operational delivery. Digitalizing the delivery process can help reduce errors, simplify operations, and effectively transform data into critical information for evidence-based policymaking. The second pillar is *integrated systems*. Interoperability with other public or private institutions can generate economies of scale, reduce red tape and bureaucracy and improve real-time coordination across different units. In this last statement, the keyword "real-time" is crucial as an integrated system brings all relevant information for a household or an individual from tens or more different public and private institutions, usually in less than a minute. Since vulnerable families or individuals are usually in need of multiple policy interventions, integrated systems can help service providers better decide on how to best respond to the needs of their citizens compared to traditional, paper-based systems.

According to Barca (2017) and Leite et al. (2017), digital and integrated social assistance provision systems better serve the needs of the people. The digital and integrated systems focus on inclusion, efficiency, effectiveness; accuracy, integrity; accountability, and citizen empowerment. Integrating systems can increase social protection programs' inclusion, efficiency, accuracy, and accountability in multiple ways. ***Table 2*** summarizes the benefits of integrated systems based on Barca (2017) and Chirchir and Barca (2020). Our case studies in Section 4, especially on Indonesia and Türkiye, reveal further that the countries moving to integrated systems can significantly reduce paper and time-related labor costs while eliminating duplications, reducing errors and omissions, and increasing the number of rightful beneficiaries.

Table 2 Benefits of integrated social protection systems

Potential Benefit	How?
Inclusion	· Increasing responsiveness · Better coordination · Higher equity in social protection
Effectiveness and Efficiency	· Less the burden on citizens · Less burden on public officials · More evidence-based policymaking
Accountability	· Higher transparency · Better oversight, reporting, and planning · Larger knowledge sharing · More opportunities for feedback
Accuracy and Integrity	· Fewer errors, omissions, and gaps · Efficient validation · Limiting the scope for fraud

Source: Barca (2017) and Chirchir and Barca (2020)

2. PILLARS OF INTEGRATED INFORMATION SYSTEMS FOR SOCIAL PROTECTION

2.1 Definitions and Concepts

A monitoring and Information System (MIS) is defined as a simple set of functions that allow the flow and management of information for a critical process. In this regard, information is a set of classified and interpreted data used in decision-making, such as inferences or predictions drawn from data. At its core, MIS adopts approaches that provide crucial inputs for the efficient and effective performance of various programs on a managerial level. The administrative level involves planning, controlling, monitoring, and making decisions.[12]

The planning consists of (1) identifying objectives, (2) tying those objectives to activities that eventually strive to achieve the objectives mentioned above, (3) pinpointing resources, and finally, (4) determining the duration and sequences of activities to be performed. Through the planning process, the foundation is laid, and the procedures are determined to collect information. On the other hand, the monitoring and controlling phase allows the information to be (1) collected in line with laid out procedures and principles, whereas monitoring further allows to (2) establish a performance standard. By establishing a standard of performance, actual performance could be compared against the set standards where mid-course corrections may occur depending on the severity of deviations from targets. The information collected and analyzed within this system will eventually pave the way to choosing the most optimal alternatives when solving a problem or achieving an objective or goal. In this regard, the soundness of the information collected becomes crucial, as managerial decisions often depend on the information available to decision-making authorities.

The design and systematic flow of MIS are the core of social protection schemes.[13] Social protection schemes should be understood as *nationally designed policies and programs that provide equitable access to all people and protect them throughout their lives against poverty and risks to their livelihoods and well-being.* The protection could be provided through multiple channels, such as cash or in-kind benefits, contributory or non-contributory schemes, and

[12] FAO Management Information Systems Training Session 1
[13] Chirchir, R. & Kidd, S. (2011). Good Practice in Development of Management Information Systems for Social Protection. Briefing no. 5, HelpAge International.

programs to enhance human capital, productive assets, and access to jobs.[14] This alludes to the fact that all social protection schemes, as in MIS, must be managed effectively and efficiently so that the information collected can influence informed policy decisions. Within a social protection mechanism, the information system is often supplemented with additional sources, such as strategies involving public communications & training, human resources, financial management, monitoring, and evaluation.[15] This integration of information systems and other systems emphasizes the importance of integrated information management for social protection.

Table 3 summarizes the main definitions that we use in this report. It is necessary to avoid confusion about the meaning of terms because they may be used in different contexts. In particular, the difference between social registries and integrated beneficiary systems needs to be defined clearly: while all registries cover all potential beneficiaries, integrated beneficiary systems bring together databases of existing beneficiaries. The new paradigms of social protection, particularly after COVID-19 and climate change-related risks, underline the importance of dynamically expanding the coverage of existing programs by connecting social registries and integrated beneficiary systems. MIS tools are essential in creating this synergy.

Table 3 Main definitions

MIS	Systems allow data from multiple sources provided by various institutions/organizations to improve efficient program management. In the context of social protection, MIS tools aim to foster data sharing and information-based coordination between different social protection programs.
Social registries	Database(s) of potential beneficiaries, i.e., all individuals or families, may not be the

[14] Global Partnership for Universal Social Protection, 2019.
[15] Loewe, M., & Schüring, E. (2021). "Chapter 1: Introduction to the Handbook on Social Protection Systems". In Handbook on Social Protection Systems. Cheltenham, UK: Edward Elgar Publishing. Retrieved May 5, 2022, from https://www.elgaronline.com/view/edcoll/9781839109102/9781839109

	whole population. Data are centralized before being used for specific programs, typically at the national level. They may exist for different purposes in the first place, such as those available in birth registers or address databases. They are helpful in integrated social assistance registration/intake and assessment phases.
Integrated beneficiary systems	These systems enable data flows between different social assistance programs, which may target overlapping sets of beneficiaries. For instance, some families get cash assistance if health assistance programs cover families. An integrated system can trace both programs, allowing the managers to identify individual and family support. These systems cover existing beneficiaries. They are best suited to get better oversight of existing programs.
Interoperability	Technical and institutional capacity to share information between different programs. Integrated beneficiary systems ensure different levels of interoperability. While coordination can be defined based on social assistance organizations/entities, interoperability is defined concerning specific programs.

Dynamic inclusion	Expansion of the existing programs' coverage, especially during and after unexpected shocks such as health crises, economic downturns, and climate change-related events (droughts, trade disruptions, etc.)

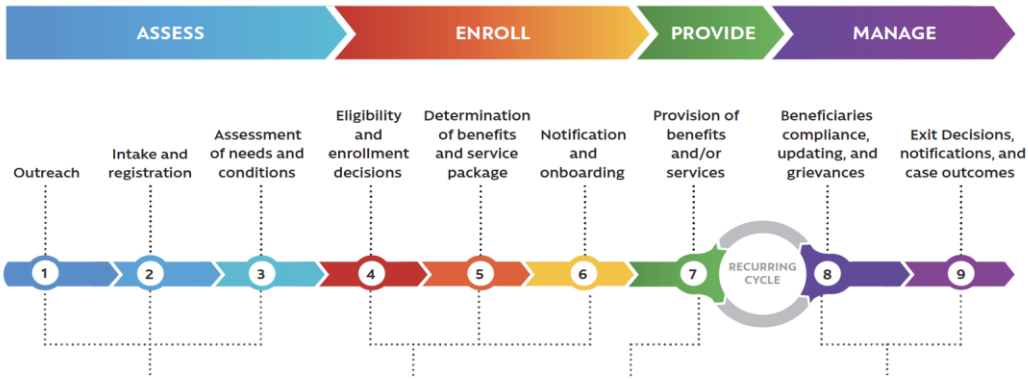
2.2 Role of integrated information systems during the process of social assistance

Integrated information management combines various databases from various sources using data integration tools, typically a software environment. Through a social protection lens, integrated information systems promote higher inclusivity as such systems can provide timely information while responding to shocks or other stressors. Notably, the creation of social protection online portals after the outbreak of COVID-19 shock in many countries has brought the need to digitize integrated information systems. The adoption of integrated digital systems amplifies inclusivity. It fosters efficiency and effectiveness, as they help ease the burden on applicants and staff, provide mechanisms to capture accurate data, and allow data verifications simultaneously as the applicants input their data in the information system.[16]

The following flowchart (***Figure 7***) describes the main stages of the delivery of the social protection systems. Following the successive steps, we outline how integrated information systems can address the weaknesses and shortcomings of each step. (World Bank, 2020)

[16] Loewe, M., & Schüring, E. (2021). "Chapter 1: Introduction to the Handbook on Social Protection Systems". In Handbook on Social Protection Systems. Cheltenham, UK: Edward Elgar Publishing. Retrieved May 5, 2022, from https://www.elgaronline.com/view/edcoll/9781839109102/9781839109

Figure 7 Main stages of the social assistance delivery chain



Source: World Bank, 2020, Sourcebook on the Foundations of Social Protection Delivery Systems

Outreach, intake, and assessment: where Social Registry is the most useful

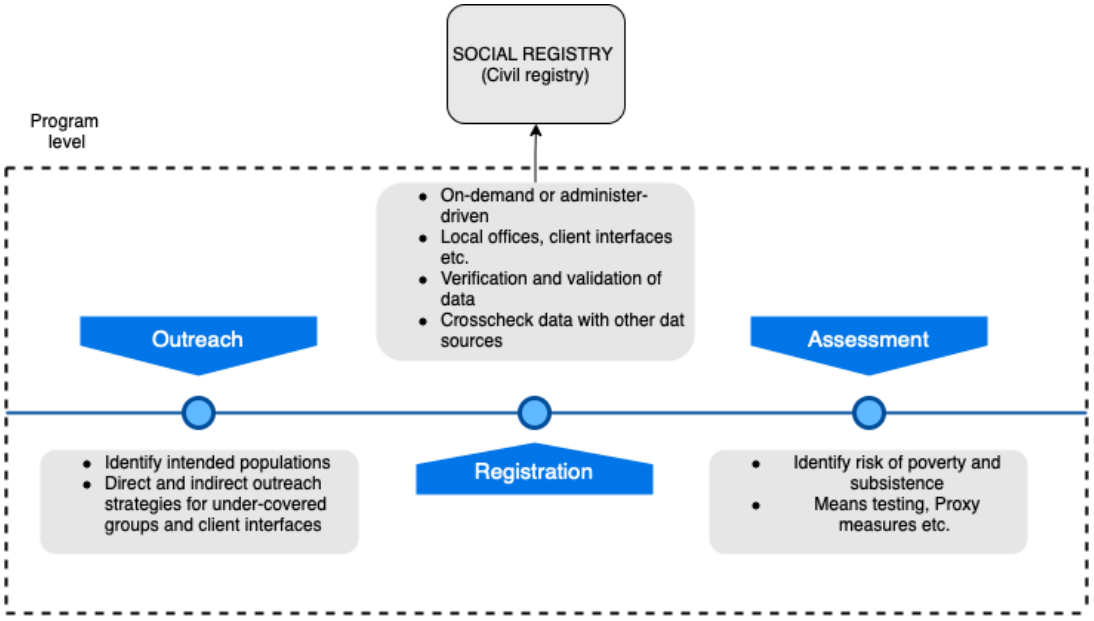
The first step in building an effective delivery system is identifying the intended population. (**Figure 8**) In many cases, the employed and urban population benefit most from social assistance. At the same time, the elderly, women, children, rural communities, informal employees, and refugees are more likely to be left out by the existing systems. Each potentially targeted population group has different circumstances, and thus different strategies may be needed to address the weaknesses in targeting strategies.

As far as the children, women, and elderly are concerned, their limited access to digital technologies could be the main challenge in improving their access to delivery systems for this group.

- Children are dependent on their parents;
- The elderly may have a restricted capacity for technology;
- Women may have little mobility due to the existing social division of labor and cultural constraints.
- Urban poor and homeless may also have limited capacity to access technology, too.
- Rural poor or nomadic groups often have geographical limitations.
- Refugees may be socially isolated, thus restricting the potential to extend delivery.

- Those employed in the informal sector typically have been undermined by the shortcomings of the existing delivery system in dynamically monitoring the changes in employment conditions.

Figure 8 Outreach, registration, and assessment



Source: Authors' work.

Different modalities are needed to address the specific challenges that these groups experience.

- **Direct outreach** can be preferred to target more effectively the existing beneficiaries or those employed in the formal sector whose employment and income status change abruptly due to sudden shocks such as climate crises or health emergencies like COVID-19. One-to-one communication, outreach officers, local social service offices, or mobile teams are primary examples of rapid improvement. Direct outreach primarily needs to increase organizational and financial capacity on the part of the administration. Again, on-demand systems where the potential beneficiary initiates social assistance delivery can be sufficient for the existing beneficiaries.

- In the case of rural poor or migrants, **community-based outreach or intermediaries** (such as private firms, NGOs, or indigenous groups) can benefit from the existing informal communities. Getting help from local leaders, faith-based groups, and community organizations may be particularly effective. Since such groups may be distinctive in terms of language and faith, given that the existing organizational capacity may be low in such areas, the easiest way to improve effective targeting can depend on individual or community-level intermediaries.
- Finally, it may be possible for the urban poor or informal workers to utilize information technologies with efficient **client interfaces**. Websites, mobile apps, and social media are helpful in cases where urban-based groups have enough access to such technologies. Also, if a sufficient number of organizational sources are available, the administer-driven systems can be activated.

Therefore, addressing the specific problems with the needs of each group and developing effective organizational and technical outreach strategies are vital to making progress in this area. To determine the current outreach level, main challenges, risk potential, and suitable outreach methods, it is helpful to get comprehensive data systems on the level of participation, existing selection criteria, employment status, and benefits before the outreach development. Additional considerations are the number of existing programs, whether the outreach is initiated by potential beneficiaries or administrators, budget and organizational resources, and interconnections between different institutions at the local and national levels. If limited resources are available, some prioritization can be preferred as the administrators can be focused on the areas where they can achieve fast outreach. To identify such regions, livelihood risks can be evaluated by developing relevant metrics for each group.

Once the intended populations are determined and effective ways of outreach have been explored, there emerges the need to register the potential beneficiaries and record the relevant data accurately. In practice, intake or registration happens through tools such as local offices, mobile teams, or digital interfaces. Important parameters are the frequency of the client registration attempts and whether the administrators or the potential beneficiaries initiate the contact for intake. Once the registration is complete, data provided by individuals are needed for verification and validation, which requires tools such as interviews, double-data entry, random error checks, documentation requests, or questionnaires. Also, in many cases, the

individual data need to be crosschecked with the additional administrative data collected by other organizations at the local or national level.

Profiling and assessment following the registration stage require developing composite measures to identify the risk of poverty, subsistence, or a relevant metric. Several methods have traditionally been used for profiling and assessment, such as Means Testing, Proxy Means Testing, Hybrid Testing, or community-based targeting.

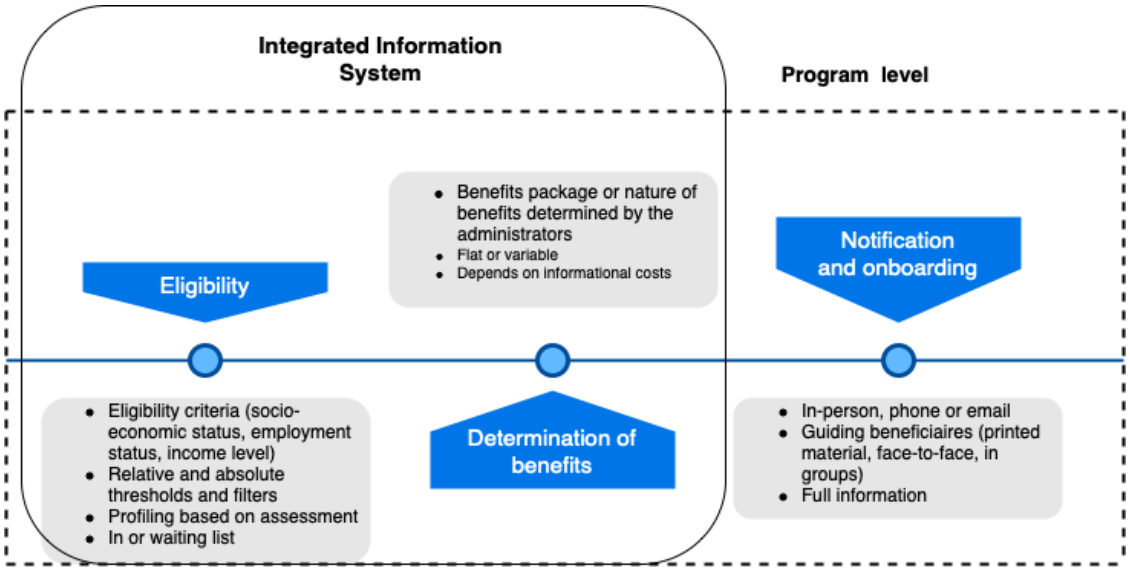
When multiple social assistance programs are in place, and many individuals are the potential beneficiaries of different delivery services, it becomes crucial to increase interoperability between the databases held by other organizations. Therefore, information systems are beneficial for integrating the processes of registration and assessment for various programs. **Social registries** are helpful in better coordinating alternative data warehouses on registered individuals and the integrated evaluation of individual needs. As such, by integrating both data provided by individuals (and validated) and additional data provided by different organizations, social registries can make the subsequent stages of social protection much more effective. Overall, social registries can be considered a knot in the information network between the separate, complex, and diversified registration and provision stages of delivery of multiple programs. Social registries allow better interoperability even within the relatively disintegrated social assistance programs. Such integration requires standardization of data practices and conventions, technical definitions, and standard terminology for information processes. Most certainly, identifying each beneficiary with a unique ID is useful. The unique ID can be provided by birth registries, tax or property databases, social security registration, or educational services.

Enrolment: Towards the integrated beneficiary system

Once the assessment of the applications of the potential beneficiaries is complete, the policymakers need to start the enrolment stage consisting of the decision on who is eligible for support, the determination of the assistance package, and finally, the notification of the results to the applicants and onboarding. (***Figure 9***)

- Eligibility decisions must relate to the specific criteria of the program. Typically, that considers the socioeconomic status, employment history, and income level at the individual and family level. Several methods are possible through the decision process, such as absolute and relative benchmarks or exclusionary filtering. Finally, based on the decision, the applicant can be provided support immediately or allocated to the waiting list. Alternatively, the first-come-first-serve methods can also be chosen. What matters here is that the eligibility decision requires data flows from other programs or databases, such as financial records, employment history, or data on poverty levels, which can be determined based on income surveys. Therefore, this stage should be supported by integrated data sharing or other organizational datasets allowing uniquely identifying the individual and her family status.
- The determination of the assistance package can be flat, as in the case of fixed poverty cash support or disability payment, or variable, as in the case of unemployment benefits, as a ratio of the recent individual wages. For the latter, the issue may be more complex, requiring additional information such as beneficiaries' past or family income, wealth, or properties. For instance, if the poorest section of beneficiaries is decided to be provided the most significant amount of cash support, identifying whether the applicant is in that category needs more information, which is provided by other data sources. An integrated information system is necessary to make such complex decisions viable.
- Finally, once the package is determined, it is necessary to notify the applicant with sufficient information, such as how, when, and on which condition the support will be provided. The notification should be made in a suitable medium (face-to-face, by phone, or by email). Depending on the complexity of support, the beneficiaries should be guided sufficiently.

Figure 9 From eligibility to onboarding



Source: Authors' work.

Social assistance provision

The provision of assistance can take two forms: cash payments and the provision of services, such as health and education services. Due to the inherently different nature of these two, we outline their main features differently. Cash transfers represent more than half of social assistance spending globally (World Bank 2020, 199). COVID-19, in particular, has given impetus to switch to cash payments in many countries, as it provides a secure, fast, and reliable way of providing relief.

- The increasing digitization in finance and access to financial services help this trend, thereby increasing the efficiency and transparency of the support provided.
- Safety, speed, security, and privacy are the main advantages of such systems.
- However, the switch to cash transfers has a drawback in that those who have limited access to financial systems (bank, technology) are more likely to be left out of this process. In particular, the rural poor, women, and the elderly with little mobility won't benefit from the switch to cash as much as others.

- Yet, by contrast, digitalization in social assistance has arguably the potential to increase financial inclusion for such groups.
- As the number of social protection programs gets higher and their content becomes complex, policymakers tend to adopt G2P (Government-to-person) 4.0 approach, which allows transactions from many social programs to many beneficiaries. The approach requires a high level of interoperability between the programs. Ideally, the integrated systems comprising various financial institutions and tools (banks, post offices, telecommunication firms, ministries, local municipalities, and non-bank financial organizations) must be set up to enable G2P 4.0 fully.
- The choice of specific payment methods depends on the existing financial infrastructure and regulations in the country, though. In an environment where financial inclusion is already high, with potential beneficiaries having access to bank accounts, investing in financial data integration can be helpful, for instance, through a payment gateway. In contrast, if the banking sector is limited in depth and breadth, the existing public institutions, such as post offices or ministerial payment offices, can be improved more quickly.

The provision of assistance also takes the form of the services provision. By services, we mean specific support types addressing the vulnerabilities that cannot be tackled with cash payments. The primary examples are early childhood interventions, health services, disability services, and unemployment support.

- While cash provision is indispensable and widely used as a social protection tool globally, the service provision is less common yet, has the potential to complement the financial support in the areas where the market mechanisms are fully operational.
- Service provision, like cash payments, needs an integrated approach, as disconnected bodies typically undertake them without sufficient coordination. To decrease redundancy, policymakers need to connect various service providers to create a coherent framework. In particular, the current state's underrepresented groups should focus on specific provision methods.
- There are multiple ways to improve the existing service provision: In many countries with well-defined provision systems, the on-demand method where the potential beneficiary contacts the service provider is prevalent. When the service provider is underdeveloped, the policymakers need to start by connecting existing simple systems,

then adding more complex elements, depending on the needs and intended groups, in an integrated setting.

- Quality is an additional concern in the service provision, different from cash payments. Therefore, the system design must include regular quality checks and improvements.

Management of social protection systems, dynamic inclusion, and updating

Overall, the health crises, migration, or climate-related shocks underline the importance of one of the most ignored dimensions of the social protection delivery systems: continuous management of the programs and dynamic updating. (***Figure 10***) This stage broadly refers to improving the existing systems given their weaknesses, errors, inefficiencies, and shortcomings observed from the outreach to the support provided. Throughout, the quality of the delivery should be checked, and the results should be feedback for backward correction and improvement. That can be done on a program basis and, overall, for the integration of the system.

The emerging grievances for certain sections of the population, typically under-covered by the existing programs, need to be addressed. This can be described as the need for continuous feedback on the current operations. In addition, the errors, inefficiencies, and unreliability at any stage of delivery, from registration to provision of benefits, should be a part of such progressive feedback processes.

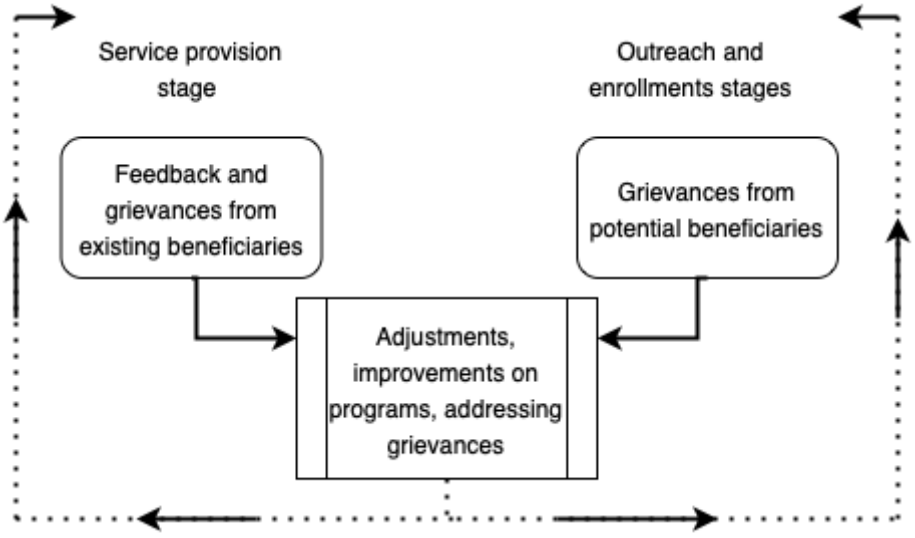
The management of delivery systems thus arises out of the need for correcting delivery problems, maintaining the benefit packages, monitoring compliance with the priorities of each program, getting feedback from clients, and monitoring further progress at the individual level. Since the delivery and provision systems occur based on particular programs, ideally as part of an integrated system, the dynamic management can first be designed separately at the level of individual programs. Then the relevant data can be fed into the integrated approach by updating data on clients and identifying the program-level inefficiencies. Therefore, information systems must correct errors at the program level and update individual-level data that vary from program to program.

- The main inputs of the management process are the outcomes of the provision of services for the existing beneficiaries and outreach and enrolment outcomes for the

new potential beneficiaries (dynamic inclusion). Examples are the data on services provided, the conditions defined in the provision, and grievances those within and outside the system presented.

- Outputs of the process are the revisions and improvements to the existing systems, such as the level of provided cash and services, the procedures followed in each stage, and the quality of inclusion.
- Three tasks are carried out at this stage: beneficiary data management at both program and aggregate levels, monitoring of conditionalities, and the mechanism of addressing complaints, grievances, and thus adjustments.

Figure 10 Management and updating of existing programs



Source: Authors' work.

Software application connecting phases

So far, we have explored how the main phases of social assistance programs work, from outreach and registration to providing services and cash payments. The final stage was continuously updating and managing grievances and feedback to improve systems dynamically. We also underline the importance of integrated information systems in each phase. In

particular, social registries are essential at the initial stages of outreach and registration. The integrated beneficiary systems were increasingly helpful in later stages, notably, the assessment and provision.

While different modes of information systems, such as client interface and integration of financial data, are critical at various stages, the overall benefit of the integration can be sustained when a software application complements the whole system as a data-sharing interface of different programs (Barca, 2017). All social protection integration systems aim to end up with a dynamic, accessible software application. The stakeholders, central government, local offices, and beneficiaries should be able to access different software components. The software should connect:

- Different social assistance databases
- Different social insurance databases
- include additional databases such as tax records, property data, addresses, civil registries, and health and education data.

Ideally, all databases can be linked by the unique ID of individuals. Even though such a setup does not exist in many countries, that can be considered an end-point the existing system aims to reach.

2.3 Investing in administrative data collection matters

The previous discussion emphasizes many dimensions of how integrated information systems need investment by policymakers. The investment needs to be multifaceted and comprehensive, mainly comprising the areas of technical expertise, data infrastructure, human capital, and governance. The policymakers need to consider that creating such technical designs is not merely technical in that the right institutions, expertise, and administration must complement the technical solutions. Therefore, information innovations are institutional innovations.

- The existing databases, at the program and national level, are usually starting points of the innovation. However, in many cases, they need to be improved, the data quality should be enhanced, the different databases should be talking to each other, and finally,

additional databases should be created. What matters is that data accuracy, data reliability, and updating data are critical to creating a dynamic data environment.

- Existing human resources should be able to use such systems effectively. That needs, at least initially, some training and hiring of new personnel with sufficient technical skills are necessary.
- It is important to align with different organizations' dynamics and interests. A functioning information system needs the participation of all stakeholders. Various ministries, local authorities, and information centers should willingly share data and feed further data into the system, requiring their operational concerns and interests to be considered. Even though the political authority supports the reform of the social protection system, stakeholder participation determines the degree to which the challenges can be overcome. Legal restrictions and power relations should be taken seriously.
- Finally, the beneficiaries should also be willing to share information so that the system design should reflect their concerns and interests. That is particularly the case concerning data privacy.

2.4 Advantages and Challenges

Integrated information systems benefit targeting, efficiency, accuracy, and accountability (Barca and Chirchir, 2020).

- Linking the existing programs to social registries significantly increases the power of targeting and the prospect of dynamic inclusion. Individuals in the informal sector, rural poor, and women may be provided access to social protection. Coordination between the programs increases the scope of outreach.
- Integrated beneficiary systems can obtain efficiency gains. The multiple programs in many developing countries typically target similar and easily accessible individuals, thereby creating redundancies in provision. Once the data on different programs are combined in an integrated system, ideally with a unique ID, it is possible to track better how each beneficiary benefits from various programs. This reduces the burden on people, organizations, and resources. Integrated digital systems lead to data-based decision-making.

- Data-based validation, verification, and analysis lead to easier identification of errors.
- The integrated information systems make it more likely to address grievances. When the system updates the beneficiaries' employment, income, and livelihood conditions, it is possible to address emerging needs and grievances. Information systems are usually more transparent, allowing for feedback from the citizens and other stakeholders.

However, such systems are not without challenges and shortcomings:

- Establishing complex integrated systems has costs, both financial and organizational engagements.
- Integrated systems need data sharing and coordination between involved parties, which opens up the arena of data politics.
- Not-viable implementation strategies, such as aiming “too big,” may result in disappointment, political costs, and organizational disorder.
- Naive technical approaches without considering the larger context (technological and institutional capacity) may result in immature failures.

3. INTERNATIONAL AND OIC EXPERIENCE WITH INTEGRATED SOCIAL ASSISTANCE SYSTEMS

3.1 Growing need for social protection and MIS

The number of countries which moved to partially or fully integrated systems has been increasing over the last decade. This trend has been significant not only among developed countries but also among OIC members. Since 2010, Azerbaijan, Türkiye, Uzbekistan, Pakistan, Qatar, and Indonesia have built nearly fully integrated systems. In contrast, other member countries such as Albania, Malaysia, United Arab Emirates, Egypt, Tunisia, Lebanon, Morocco, and Tunisia have made significant progress in achieving high levels of integration and interoperability across national institutions, as shown in Section 3.2.

It is not a coincidence that the number of countries adopting integrated digital systems is increasing, especially developing world. International organizations such as the World Bank, UN, and UNICEF have been promoting and financing projects that increase the efficiency of social assistance delivery through partly or fully integrated systems in countries where the need are the most intense. The COVID-19 pandemic has unfortunately shown that sudden shocks can erase the years of progress achieved in poverty reduction. The COVID-19 pandemic and the grim scenarios under the ongoing climate change and global warming force governments to prepare for the worst to act swiftly and reach out to target populations.

While the poverty rates have sadly increased due to the COVID-19 pandemic, this shock has also provided an opportunity to upgrade the existing social assistance delivery systems for many countries. As a helpful case study, UN ESCWA (2020) looks at how the social assistance programs adapted to expand assistance to the large section of populations affected by the COVID-19 pandemic in Arab countries.[17] First and foremost, the pandemic speeded up the institutional and technical innovations that had long been in the pipeline to be completed. Social registries have enabled some countries to quickly increase the number of beneficiaries without long waiting periods, both vertical and horizontal expansion. Also, temporary emergency schemes were made available, mainly targeting the informal workers who are typically out of insurance and assistance systems. For instance, the experienced countries quickly made

[17] UN ESCWA (2020), *Targeted Social Protection in Arab Countries before and during the COVID-19 Crisis.*

available virtual application systems not to allow social distancing to prevent the expansion of the programs.

O'Brien et al. (2018a, 2018b) systematically outline how the existing social protection systems can address the mitigation of shocks and crises.[18] They offer five different ways to enhance the safety nets at the time of crisis: design tweaks (minor adjustments to the routine programs), "piggybacking" (using existing tools to provide a different response), vertical integration (extension of transfers for existing beneficiaries), horizontal integration (extension of transfers to the new beneficiaries) and alignment (aligning transfer programs with one another). While motivated by different institutional structures, policy aims, and degrees of shocks, these responses all commonly need better information systems, as they require tweaking or radically altering existing approaches in one way or another.[19]

World Bank (2018) stresses the importance of the need for the adaptation capacity of the social safety nets to the changing external circumstances, primarily for the shocks and disasters related to climate change.[20] Two dimensions make the resilience of the social safety systems to external shocks: First, within countries, the poor and vulnerable sections of the population are typically those who are more exposed to the unexpected effects of the shocks or are less able to shocks effectively. Second, countries with smaller social assistance coverage are more likely to external shocks. Admittedly, these warnings were more directed toward risks, shocks, and disasters that could be related to climate change. Though that is still valid, COVID-19 posed more significant threats: While the public health risk created by the global pandemic affected all countries, the poor population had less capacity to mitigate the pandemic, particularly in the lower-middle-income countries, where the financial measures to help the vulnerable were more limited. In this connection, World Bank calls for the need for Adaptive Social Protection, defined as "a series of measures which aim to build reliance of the poorest and most vulnerable people" to external shocks.[21]

[18] O'Brien, C., Scott, Z., Smith, G., Barca V., Kardan, A., Holmes, R., Watson, C. and Congrave, J. (2018a) "Shock Responsive Social Protection Systems research: Synthesis report". OPM, Oxford, UK.
O'Brien, C., Holmes R. and Scott, Z., with Barca, V. (2018b) "Shock-Responsive Social Protection Systems Toolkit—Appraising the use of social protection in addressing largescale shocks". OPM, Oxford, UK.
[19] Barca, V., & Beazley, R. (2019). *Building on government systems for shock preparedness and response*.
[20] World Bank. *The State of Social Safety Nets 2018*. The World Bank, 2018.
[21] Arnall, Alex, et al. "Adaptive social protection: mapping the evidence and policy context in the agriculture sector in South Asia." *IDS Working Papers* 2010.345 (2010): 01-92.

One pillar of Adaptive Social Assistance is to increase flexibility and scalability in the design of social assistance programs. Scaling up means adjusting the programs to non-regular beneficiaries during shocks through vertical or horizontal expansion.[22] While vertical integration refers to extending additional assistance to the existing beneficiaries during shocks, horizontal expansion addresses the extension of safety nets to the new beneficiaries (non-regular ones), calling for a more dynamic adjustment to the existing setup, financially and institutionally. Census-sweep approach through a centralized way is the easiest way to do that, while it is more rigid. On the other hand, when the information systems are adjusted for the new definition of risk and vulnerabilities is necessary to address vertical and horizontal expansion. Early warning and risk mapping embodied with the monitoring and information systems can provide crucial information on who is more likely affected when, how, and to which degree. Such information systems need to be integrated with the existing social protection systems. Therefore, effective monitoring and information systems appear to be the key ingredient in the development of Adaptive Social Protection when shocks, natural, climate, or public health-related risks emerge.

While discussing how the existing social safety net systems can effectively challenge COVID-19 pandemics in developing countries, Gerard et al. (2020) point to two mechanisms. First, they can improve the social insurance programs, which are notoriously backward in those economies compared to the high-income countries. Second, they may make full use of the existing social assistance systems. Both options need better information systems.[23] Social insurance, such as covering the salary losses of existing workers due to the pandemic, required more precise information on wages and earnings. Likewise, extending emergency payments to the existing assistance beneficiaries depended on better payment and information setups.[24] Both cases posed a more significant challenge that needed a clear response in a fast manner due to the nature of the pandemic.

[22] Oxford Policy Management. 2015. "Conceptualizing Shock-Responsive Social Protection." https://www.irishaid.ie/media/irishaid/allwebsitemedia/20new sandpublications/publicationpdfsenglish/s-2947 /IA- Social-Protection-Strategy-2017.pdf.
[23] Gerard, F., Imbert, C. and Orkin, K., 2020. Social protection response to the COVID-19 crisis: options for developing countries. Oxford Review of Economic Policy, 36(Supplement_1), pp.S281-S296.
[24] Rutkowski, M., Mora, G., Bull, B., Guermazi, C., and Grown, C. (2020), 'Responding to Crisis with Digital Payments for Social Protection: Short-term Measures with Long-term Benefits', https://blogs.worldbank.org/voices/responding-crisis-digital-payments-social-protection-short-termmeasures-long-term-benefits

Barca and Beasley (2019) identify six areas of information management that need attention at the time of shocks and crises: Completeness (data coverage of existing or potential new beneficiaries), relevance (if the information is relevant for extending or adjusting the programs in response to the immediate need arising from the crisis), data currency (how current the information is), accessibility (how accessible the information is), data accuracy and finally data protection. These points summarize critical dimensions of how the existing information structure can be improved to address the emergencies of the crisis of shocks. Lindert et al. (2020) outline one of the most up-to-date approaches to developing an efficient integrated information system emphasizing that both social registries and integrated beneficiary registries should be combined to address different needs at the subsequent stages of assessment, enrolment, provision, and monitoring of social transfers.[25]

In what follows below, we first present successful examples from the world and then zoom into the specifics of the social assistance delivery systems across the OIC members, focusing on documenting the current status in terms of integration and digitalization.

3.2 International best practices

Countries with strong welfare states usually regularly update their social assistance system in line with technological innovations. These countries usually can reach out to the beneficiaries without difficulty as they have the financial resources and means to do so, unlike many other developing countries. Yet, this ability does not just stem from having sufficient resources. This set of countries also seek higher levels of transparency and equity and are usually more open to adopting new technologies to improve the efficiency of the welfare states. Scandinavian countries, in that respect, set the frontier for relying on integrated systems and advanced use of administrative data in service provision. However, the need for social protection in such countries is somewhat different than in the rest of the world. Developed countries usually face the risk of an aging population rather than other acute problems such as poverty, child malnutrition, informal employment, etc.

[25] Lindert, K., Karippacheril, T. G., Caillava, I. R., & Chávez, K. N. (Eds.). (2020). Sourcebook on the foundations of social protection delivery systems. World Bank Publications.

Among these countries, Finland already has a relatively integrated system where the local governments (municipalities) organize most primary care and social services and run, together with other cities, hospital districts for specialized services (Keskimäki et al. (2018)). The current Finnish health and social care system is the most decentralized in Europe; the primary responsibility for organizing health and social services lies with the 297 municipalities. The social assistance system in Finland is also integrated with employment services and children's and young individuals' centers. The aging Finnish population and rural-urban migration are creating challenges to the structure of the Finnish health and social care system.

The European Commission report (2018) on the integrated delivery of social services focuses on the effectiveness of the European state's social delivery systems in tackling labor market problems.[26] The report shows that the European states, Germany, Denmark, Finland, and Norway, have robust integrated systems and highly effective social and employment programs. France, Portugal, Estonia, Slovenia, Netherlands, Belgium, Austria, and the UK have medium levels of integration. Still, among those countries, France, Portugal, Estonia, and Slovenia have relatively weak social and employment programs, whereas the rest have effective programs. Not surprisingly, the newly accepted EU members with relatively lower income per capita levels, such as Hungary, Romania, Czech Republic, Hungary, Lithuania, Poland, and Slovenia, exhibit weak levels of integration and interoperability across different databases. These figures suggest that wealthier EU members are more likely to have a medium to a high degree of integration in social assistance provision. Among the more affluent members of the EU, only Italy stands out as a developed country with weak integration and weak social protection.

3.3 Structure of social assistance systems in OIC countries

In this section, we evaluate the degree of integration of the social assistance provision in member countries and provide examples of best practices outside the OIC world. The main contribution of this section is to identify basic typologies and categorize the member countries in relevant integration metrics. We first introduce our methodology in Box. 1, evaluate the

[26] http://www.budapestinstitute.eu/KE-04-18-545-EN-N.pdf

performance of countries in Table A.1 in the Appendix, analyze the responses in Figures 3.1, 3.2, and 3.3, and then group member countries according to their integration scores in Table A.1.

Figure 11 shows that in most countries that responded to the survey, there is a political commitment to moving into integrated systems. Based on the responses and supporting research, at least 24 OIC members for which integration is a priority. The other most common response is the existence of a form of MIS in member countries. The number of countries where the social assistance provision relies on a management information system is at least 22. The existence of social registries follows this component. The number of member countries with a social registry is at least 21. In at least 17 countries, there are individual data protection laws.

On the other hand, few member countries seem to have dynamic inclusion of beneficiaries and a single data platform. That is not surprising as these two components exist only in more advanced social assistance systems. Active inclusion of beneficiaries exists in Albania, Azerbaijan, Bahrein, Indonesia, the Islamic Republic of Iran, Malaysia, Pakistan, Qatar, Türkiye, and Uzbekistan, and efforts are ongoing in Egypt. A single data platform connecting with other public databases exists only in Bahrain, Pakistan, Qatar, Türkiye, and United Arab Emirates. Building a single platform is ongoing in Egypt and Morocco and is planned in Jordan and Somalia.

Figure 12 shows the years when member countries began moving into integrated systems. There is only one-member country in which policy actions appeared as early as 2001, and this member is the United Arab Emirates. Between 2005 and 2009, two more member countries, Malaysia and Bahrain, were reported to have taken policy actions. In 2009 and 2013, Algeria, Indonesia, Lebanon, Pakistan, and Türkiye joined the countries which initiated policy actions for an integrated system. The policy actions accelerated over the last decade, most notably during the pandemic. Many member countries took the opportunity to increase the efficiency of the social assistance systems, especially given the efforts and accelerated financing by international organizations such as the UNDP, UNICEF, and World Bank. Bangladesh, Iraq, Kyrgyzstan, Morocco, Somalia, Uganda, and Uzbekistan are member countries that took policy initiatives between 2020 and 2022.

Box 1. Methodology

OIC members represent a diverse group in terms of development and sophistication of the social assistance provision. For countries with well-functioning unified systems, it is usually possible to access to relevant information through desk research. However, for other countries with more traditional or paper-based social assistance provision, it is a challenge to evaluate the levels of commitment to a unified system. To overcome these challenges, we prepared an online survey and sent to member countries on June 21, 2022. We collected the responses though out July 2022 and complemented the survey with desk research in the cases of incomplete information. The survey is provided in Annex A of this report.

The online survey consisted of 31 questions that to evaluate the use of integrated information systems in social assistance. The responses to these comprehensive questions were then evaluated under the broader classifications of i) integration as a policy priority, ii) number of years since the policy actions on integration have been in place, iii) administrative structure of the social protection system, iv) existence of social registry (database of potential beneficiaries, as opposed to a database of only existing beneficiaries), v) whether the registration to the social assistance system is on-demand (initiated by people) or administrative-driven, vi) whether the social protection system is able to include beneficiaries dynamically, vii) whether the inclusion increased during COVID-19 pandemic, viii) existence of management information systems in service provision, ix) whether there is a single data platform bringing together multiple data sources of the protection services, x) data sharing sectors, xi) existence of individual data privacy legislation, and, xii) factors that hinder moving to a fully integrated system.

In order to evaluate the degree of integration of social assistance systems, we relied on a very simple scoring method. Taking into account the requirements of an integrated system explained in Section 1.4 of this report, we assigned the following weights to the components above:

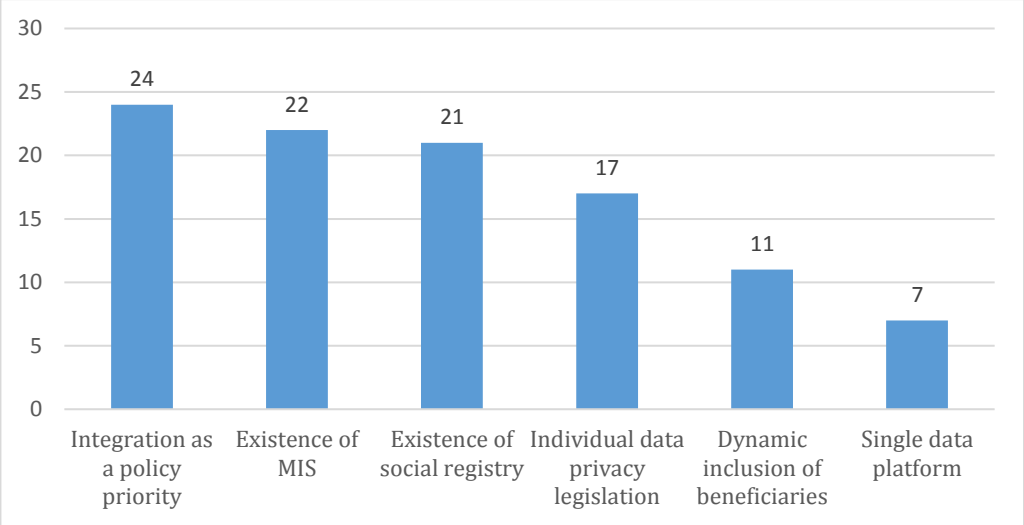
Property of the service provision	***Weight (out of 100)***
Integration as a policy priority	*5*
Number of years since the policy actions have been in place	*max 10*
Existence of social registry	*10*
Modality of registration to the social assistance system	*5*
Dynamic inclusion of beneficiaries	*10*
Existence of MIS	*20*
Single data platform	*20*
Data sharing sectors	*10*
Individual data privacy legislation	*10*

Box 1. (Con't)

While these weights are somewhat arbitrary, they reflect how important certain properties are. The literature and successful country experiences show that existence of management information systems and single data platform are crucial building blocks of unified systems and hence we assign 20 percent weight to the two properties. On the other, social registries, dynamic inclusion of beneficiaries and individual data privacy legislations are also important components, but they are not sufficient on their own for building well-functioning unified systems. Hence, we allocate 10 percent weight to these three properties. According to this methodology and weights, the highest integration score that a member country can exhibit is 100.

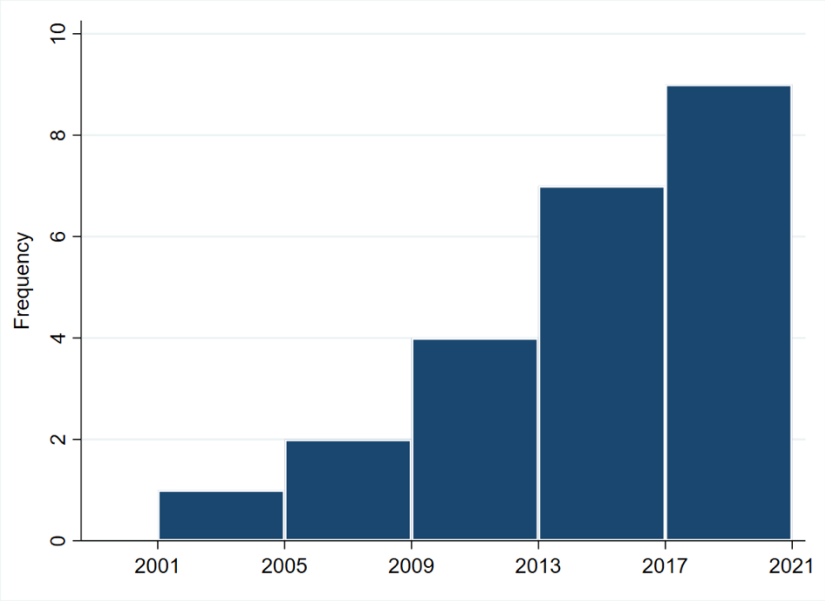
Before providing an analysis of the results, a caveat follows; there are several countries for which there was either no response to the survey, or incomplete responses were provided. For these countries, the survey responses were complemented with desk research. This means however, that the analysis we provide below represents only the lower bound for the number of member countries with basic components of integrated social assistance systems. Therefore, the results provided in this section should not be interpreted taking into account these cautions.

Figure 11 Number of OIC members with essential components of an integrated social assistance system



Source: MIS survey responses by the authorities and desk research.

Figure 12 Year when policy actions for an integrated system started



Source: MIS survey responses by the authorities and desk research.

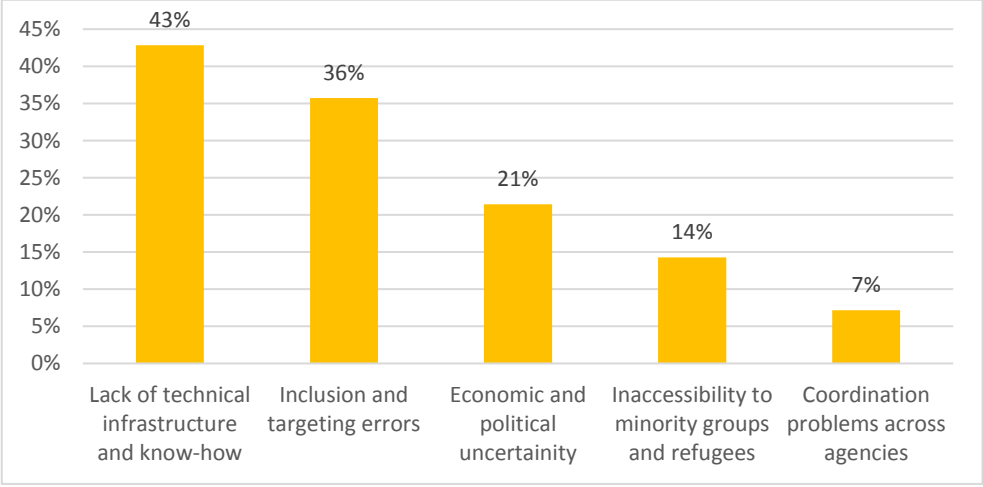
Next, we evaluate the responses provided by member countries on barriers to moving into integrated systems in social assistance. ***Figure 13*** shows the frequency of obstacles faced by member countries. Lack of technical infrastructure is the most common barrier faced by member countries, with 43 percent.[27] The second most common problem is inclusion and targeting errors, with 36 percent. These two barriers point out that most countries without integrated systems need capacity building in technology and modern, real-time targeting methods. Economic and political uncertainty is the third most common problem, with 21 percent. Difficulties in reaching out to minority and refugee groups are fundamental problems in countries like Jordan, Somalia, and Albania. Interestingly, coordination problems across public bodies do not seem significant across the member countries.

Based on the responses reported in ***Table 4***, we group OIC member countries under four categories of integration levels in Table 3.2. We classify the countries with integration scores of 80 to 100 as very high integration countries. Countries with scores between 60 to 79 are

[27] Note that since countries can report more than one barrier, the categories do not necessarily sum up to one.

classified as "high integration," with 40-59 as "low integration," and finally, countries with scores below 40 as "very low integration" countries. According to these classifications, Türkiye, Azerbaijan, Bahrain, Uzbekistan, Pakistan, and Qatar are countries with very high levels of integration. On the other hand, Albania, Indonesia, Malaysia, the United Arab Emirates, Lebanon, Morocco, the Islamic Republic of Iran, Nigeria, and Tunisia exhibit high levels of integration in social assistance provision. However, nevertheless, they still need further steps in moving to fully integrated systems. Among the OIC members, Uganda, Kyrgyzstan, Saudi Arabia, Oman, Bangladesh, Somalia, Jordan, Iraq, Libya, Mali, Sudan, Algeria, and Niger can be considered countries with low or very low levels of integration.[28]

Figure 13 Reported barriers against moving to integrated systems



Source: MIS survey responses by the authorities and desk research. Since countries can report more than one barrier, the categories do not necessarily sum up to one.

[28] It should be noted however that countries close to the score cut-offs can be classified in an upper or lower category should the weights used in the analysis are modified.

Table 4 Classification of OIC members according to integration scores

Level of Integration	Score cut-off	OIC Countries
Very high levels of integration	100-80	Türkiye, Azerbaijan, Bahrain, Uzbekistan, Pakistan, Qatar
High levels of integration	60-79	Albania, Indonesia, Malaysia, United Arab Emirates, Egypt, Lebanon, Morocco, Islamic Republic of Iran, Nigeria, Tunisia
Low levels of integration	40-59	Uganda, Kyrgyzstan, Saudi Arabia, Oman, Bangladesh, Somalia, Jordan
Very low levels of integration	Below 40	Iraq, Libya, Mali, Sudan, Algeria, Niger

Source: MIS survey responses by the authorities and desk research. Note that depending on the weights, some countries above can move to an upper or lower category.

Overall, our analysis in this section shows that the OIC members vary significantly in terms of how advanced the social assistance provision is. Still, as expected, the degree of integration seems to correlate with member countries' development levels. In terms of geographical distribution, the member countries of the MENA region seem to have more advanced systems for social services provision. In contrast, African members seem to lag in exhibiting the critical building blocks of integrated monitoring and information systems in social assistance. In Box 2, we provide examples from other developing countries, and in Section 4, we present the social assistance systems of Türkiye, Indonesia, Sudan, and Tunisia in more detail.

Box 2. Examples from a developing country outside OIC: Chile's integrated system for social information (SIIS)

Chile is a country with 19 million population. SIIS was established in 2008 but the blocks of the system were gradually built since 1990s. Chile's social assistance system is linked with Registro de Información Social (RIS, the Single Registry) Chile Solidario (program targeting households in extreme poverty), Chile Crece Contigo (targeting children from all socio-economic backgrounds), and 15 other public institutions including education, health and employment. The system's Single Registry (RIS) is managed by the Social Information Division of the Ministry of Social Development, and it has high degree of interoperability with legal agreements with 43 state institutions and 345 municipalities. The database is periodically updated through on-demand applications made by citizens via municipal offices and by administrative records flowing from other institutions. Furthermore, every two years a census is conducted using the poverty surveys and the information on potential beneficiaries are reflected in the database. Currently the registry contains data of more than 5.7 million households and 13.7 million people; i.e. 78% of the population (2020). Chile's integrated system for social information is considered to

Sources:

Azevedo, V. M., Bouillon, C. P., & Irarrazaval, I. (2011). The Effectiveness of Social Protection Networks: The Role of Integrated Social Information Systems in Six Latin-American Countries.

Berner, H., & Van Hemelryck, T. (2021). Social information systems and registries of recipients of non-contributory social protection in Latin America in response to COVID-19.

4. CASE STUDIES

4.1 Selection of Case Countries and Methodology

The case countries chosen for this study are **Türkiye, Indonesia (East Asia), Sudan (Africa), and Tunisia (MENA)**. Identification of these countries is based on the success of the existing social assistance programs, population size, regional representation, degree of inequalities, poverty measures, and statistical capacity. Among these four countries, Türkiye and Indonesia have advanced integrated systems. Türkiye's Integrated Social Assistance System- ISAS in particular, is considered to be one of the best practices in the World. Tunisia has a partly integrated system, but it is a top priority to move to a fully integrated approach over the coming years. Tunisia also has a relatively strong social protection system among the OIC countries. On the other hand, Sudan is selected as a case country precisely because, given the risks associated with climate change, it is one of the countries that most benefit from moving to an integrated system.

In terms of size, Indonesia has the largest population among the four, with approximately 274 million individuals (2020). Indonesia is followed by Türkiye, with a population of 84.4 million (2020). Sudan is the third largest among the four, with 43.8 million people (2020), and Tunisia comes last with 11.8 million individuals. World Bank data shows that as of 2021, GDP per capita (current USD) was 9,586 USD in Türkiye, 4,291 USD in Indonesia, 3,925 USD in Tunisia, and 764 USD in Sudan.[29] Indonesia is one of the largest 17 economies in the World, followed by Türkiye at 19th rank. Tunisia holds 93 positions, while Sudan ranks 103.

The COVID-19 pandemic response has varied across these countries. While Türkiye, Indonesia, and Tunisia swiftly increased resources to alleviate the negative impact of the pandemic, the response was mixed in Sudan. The pandemic has allowed the Tunisian government to distribute electronic health identity cards and improve the social assistance database. In Indonesia, the poorest households received the most assistance: 90 percent received at least one form of assistance (cash and in-kind), 62 percent received cash assistance, and the Indonesian government committed to social protection measures, equivalent to 1.2 percent of the GDP.

[29] GDP per capita in PPP current international dollars was 30,472 dollars in Türkiye, 12,904 dollars in Indonesia, 11,594 dollars in Tunisia and 4,217 dollars in Sudan (World Bank, 2021).

These four countries constitute a balanced economic, population size, and geographical representation sample. In the following section, we explain the experience of these countries in more detail. The case studies for Türkiye and Tunisia were prepared through field visits and face-to-face meetings with the authorities. In contrast, the case studies for Indonesia and Sudan were conducted through desk research.[30] We believe the experiences of these countries set good examples of how other OIC member countries can move to partly or fully integrated systems and improve the efficiency of social assistance provision. More specifically;

Türkiye has an exemplary system called the Integrated Social Assistance System (ISAS). ISAS is an e-government system that electronically facilitates all steps related to the management of social assistance, including the application, identification of eligibility, disbursement of funds, and auditing. ISAS integrates data from 22 different public institutions and provides 112 web-based services in one easily accessible online portal. The system built by Türkiye is not only an excellent example for member countries but also for all developing countries.

Indonesia has the Data Terpadu Kesejahteraan Sosial (also known as the Unified Database, or UDB). This social registry unifies information about poverty targeting the country's most extensive social assistance programs. The UDB database covers 25.7 million households (93 million individuals) located in 82,464 villages nationwide, making it one of the largest databases of its kind in the World.

Sudan is the third largest African country, with 42.8 million habitants. The transition government formed after the 2019 revolution has undertaken a significant transformation program in partnership with the IMF and World Bank. The country is rich with natural resources but at risk of food insecurity due to the neglect of traditional smallholder agriculture. Other international organizations also have several social assistance programs to tackle poverty and food insecurity in Sudan. In this respect, Sudan is among the member countries that can significantly benefit from investing in integrated monitoring systems and receiving policy recommendations, as a case study in the report.

Tunisia has large social assistance programs, such as the Programme *Nationale d'Aide aux Familles Necessiteuses* (PNAFN), the cash transfer extended to the poorest households, *Assistance Medical Gratuite* (AMG), extending free health coverage to PNAFN beneficiaries, and

[30] We thank the authorities of Tunisia and Türkiye, in particular the Ministry of Social Affairs of Tunisia, National Centre for Informatics of Tunisia, Ministry of Family and Social Servicies of Türkiye.

subsidized health coverage to households deemed vulnerable but not poor. In 2019, Tunisia also established a new Amen Social program to combat the adverse effects of the COVID-19 pandemic. In terms of the sophistication of integrated social assistance targeting, Tunisia lags behind member countries like Türkiye and Indonesia; however, experience in Tunisia can potentially benefit other member countries in similar rankings for moving into partly integrated systems.

4.2 Case Study 1: Türkiye

Türkiye: Social assistance at a glance

Türkiye is among the most successful middle-income countries which were able to transform its social assistance system from a paper-based, bureaucratic one into an efficient, exemplary integrated system. Türkiye's Integrated Social Assistance System currently collects data from 28 public and private institutions and covers 57.7 million individuals, corresponding to approximately 70 percent of the population.

Social assistance has a long history in Türkiye. The responsible public body of social aid in Türkiye is the General Directorate of Social Assistance (GDSA) under the Ministry of Family and Social Services (MoFSS). Its roots date back to 1917. One of Türkiye's critical pillars of social assistance is the Social Assistance and Solidarity Encouragement Fund (SASEF), established in 1986 by Law No: 3294. The same Law mandated that social assistance is distributed to the beneficiaries through the Social Assistance and Solidarity Foundations (SASFs) under the chairmanship of the provincial and sub-provincial governors. There are currently 1,003 foundations across the 81 provinces and 922 counties of Türkiye. The main decision-making body for overseeing social assistance policies and funding allocations is the Ministry; however, each local Social Assistance and Solidarity Foundation branch has the autonomy the evaluate, monitor, and approve individual social assistance applications.

According to the latest Turkstat figures, the number of social protection expenditures in Türkiye was 655.6 billion TRY (approximately 91 billion USD) in 2020, increasing by 20.9 percent from

the spending in 2019.[31] This figure corresponds to 13 percent of the GDP in 2020. The majority of the social protection expenditures are pension and health insurance related. Old age payments constitute the most significant expenditure share on social protection benefits with 300.9 billion TRY, followed by sickness/health care payments with 170 billion 993 million TRY. On the other hand, according to the Ministry of Family and Social Assistance figures, the total amount of social assistance expenditures was recorded as 97.8 billion TRY by the end of 2021 (***Table 5***). Social assistance expenditures increased from 1.33 percent of the GDP in 2015 to 1.74 percent in 2021.

The allocated social assistance budget and the number of households receiving social assistance have increased over time. The total number of households that receive social assistance rose from 3 million (15.5 percent of all households) in 2015 to 5.9 million (22.6 percent of all households) in 2021. The number of households that receive *regular* social assistance also increased from 2.3 million in 2015 to 2.5 million in 2021. Still, in terms of the share, they declined from 11.9 percent to 9.6 percent of total households in Türkiye.

The Ministry currently supervises more than 40 social assistance programs in Türkiye. These programs include social assistance for families, shelter and food assistance, old age and disability benefits, health support, education support, and project assistance, broadly summarized in ***Table 6***.[32] The amount of aid provided to households varies across programs and household characteristics. The Ministry has a specific portal and a helpline to disseminate information on social assistance and household eligibility conditions.[33]

Türkiye's Integrated Social Assistance System (ISAS)

Türkiye's Integrated Social Assistance System (ISAS) is an e-government system that electronically facilitates all steps related to the management of social assistance, including the application, identification of eligibility requirements, disbursement of funds, and auditing

[31] Total social protection expenditures include broader expenditure items than social assistance and consist of sickness and health care, disability, old age, survivots, family and children, unemployment and sociak exclusion expenditures by both the *public* and *private* bodies intended to relieve households and individuals of the burden of a defined set of risks and needs (Turkstat, 2021).
[32] The municipal programs and social assistance projects by the NGOs are not included in Table 4.1.
[33] The helpline can be reached at 144 and online information is available at https://www.aile.gov.tr/sss

(MoFSS and World Bank, 2017). ISAS is based on the Social Assistance Information System (SAIS), a software program developed by the General Directorate of Social Assistance in 2009, which enabled the collection of supporting documentation for social assistance applications. The computer-based information system was launched in 2011 as a part of the "Digital Transformation Türkiye Project," which integrated data from several institutions and provided additional services to disburse funds, record and track information, and report on programs. The main aim was to use information and technology as efficient tools for all government policy-making and implementation processes (MoFSS, 2021).

ISAS was developed in cooperation with the Turkish Scientific and Technological Research Institution (TUBİTAK). Before the launch of the ISAS, applications for social assistance programs were entirely paper-based. Each social assistance program had its eligibility criteria and process. Citizens had to collect the required documents in hard copy from various organizations to verify their information, such as income, bank statements, land, vehicle, and tax registration (MoFSS and World Bank, 2017). One of the landmarks in establishing a unified system was the Prime Ministerial Decree passed in 2005, which shifted the burden of collecting individual documents for social assistance from citizens to public institutions. To this end, one-stop shops were created in sub-governorship offices, where a public servant would prepare and collect the 17 documents needed for a citizen's social assistance application. It took, on average, 15 days for the social workers to collect the appropriate paper documents from various government organizations to complete the application (MoFSS and World Bank, 2017). The software for ISAS is developed in-house by public servants using national resources in coordination with multiple government agencies without relying on external consultancy. An interdisciplinary team of project managers, social policy experts, software engineers, and information technology professionals was put together to design and implement the project.

According to the joint report by the Ministry of Family and Social Services and the World Bank (2017), the total estimated cost of ISAS development was US$13.1 million, and the hardware cost for ISAS was US$5.3 million (13.8 million TL), which included computers, servers, security systems, and system rooms. The analysis, technical design, and software costs amounted to US$7.8 million (20 million TL). The General Directorate of Information Technologies of the Ministry of Family and Social Services provides the system maintenance. The system reduced actual paper documentation and staff time significantly. According to the same report, the

Government processed approximately 2.3 million fewer documents per month in 2017 compared to 2009. The decision time required from application to approval for regular social assistance programs has been reduced by approximately 20 percent.

Initially, ISAS integrated data from 22 different public institutions and provided 112 web-based services in one easily accessible online portal for around 30 million citizens. Both the coverage and the number of integrated institutions have increased over time. Currently, the system is integrated with 28 public institutions and 117 municipalities, covering data for around 57.7 million citizens (MoFSS, 2022). The list of institutions and data integrated into ISAS are listed in ***Table 7***. The amount of time required to produce all necessary documents is less than a minute, avoids duplications, and citizens are only required to provide information for an individual national identification number. The system also covers information for foreigners under the Temporary Protection Law, and information and social assistance documents for those individuals can be accessed with the Temporary Protection IDs.

How Does the Integrated Social Assistance System Work?

The social assistance system under ISAS functions as follows; the citizens can directly apply to the local SASF branches for social assistance; at the same time, the social services staff regularly visit disadvantaged neighborhoods and households to identify potential beneficiaries. The citizens can also inform the authorities of potential beneficiaries through SASF branches or *Alo 144*. The process has seven stages: application, beneficiary evaluation, board of trustees decision, payment, auditing, reporting, and monitoring.

Table 5 Türkiye's social assistance programs

	Amount	Proportion
Social Assistance Expenditures (MoFSS, 2021)		
Total Social Protection Expenditures (Turkstat, 2020)	555.6 billion TRY	13 % of GDP
Total Social Assistance Expenditures	97.8 billion TRY	1.74 % of the GDP
Amount Transferred from the General Directorate of Social Assistance (SASEF funds + General Budget)	60.9 billion TRY	1.1 % of GDP
Amount transferred to Old-Age and Disability Salary Beneficiaries under Law No. 2022	13.2 billion TRY	0.02 % of GDP
Amount Paid for Universal Health Insurance (UHI) Contributions by the Government	34.4 billion TRY	0.06 % of GDP
Population Coverage		
Number of Households Receiving Social Assistance	5.9 million	22.6 % of total HH
Number of Households Receiving Regular Social Assistance	2.5 million	9.6 % of total HH
Number of Households Receiving Temporary Social Assistance	5.3 million	20.4 % of total HH
Number of Old-Age and Disability Salary Beneficiaries under Law No. 2022	1.5 million	5.8 % of total HH
Number of People for whom the Government pays Universal Health Insurance (UHI) Contributions	9.5 million	36.5 % of total HH
Human Resources Allocated		
Number of Social Assistance and Solidarity Foundations (SASF)	1,003	5,882 beneficiary HH per SASF
Number of SASF Staff	8,421	701 beneficiary HH per SASF staff
Number of SASF Social Assistance and Inspection Officers	3,921	1,504 beneficiary HH per officer
Main Poverty Indicators(as of 2019)		
Poverty Headcount Ratio at $1.90 a day (2011 PPP)	0.4	% population
Poverty Headcount Ratio at $3.20 a day (2011 PPP)	0.5	% population
Poverty Headcount Ratio at $5.50 a day (2011 PPP)	10	% population

Source: 2021 Annual Report of Ministry of Family and Social Services, Turkstat, and the World Bank

Table 6 Types of existing social assistance programs in Türkiye

Family Programs	Shelter and Food Assistance	Old Age and Disability Benefits
- Maternity aid - Multiple birth aid - Cash transfers to widows - Orphanage aid - Cash transfers to needy military personnel - Transfers to victims of terrorism - Natural disaster aid - Employment assistance - Martyr and veteran aid	- Food assistance - Soup kitchens - Shelter assistance - Social housing - Electricity consumption assistance - Coal and heating assistance - Social integration assistance	- Old age payments - Home-care services - Disability payments - Disabled needs assistance - Payments to households with disabled members - Old age and disabled care projects
Health Programs	**Education Programs**	**Project Assistance**
- Premium contributions for general health insurance - Conditional health transfers - Chronic diseases aid - Payments to silicosis patients - Electricity consumption aid chronic diseases patients - Health assistance	- Free textbooks - Conditional cash transfers - Conditional cash transfers to foreigners - School busing for disabled students - Shelter, transportation, and food assistance for students - Construction of dormitories	- Family Support Centers - Social Solidarity Centers - Shelter for the homeless - Social services projects - Social support for youth

Source: 2021 Annual Report of the Ministry of Family and Social Services. Note: The total expenditures amounts for each program are available at: https://www.aile.gov.tr/media/100242/2021-yili-faaliyet-raporu.pdf

As part of the application process, citizens must submit a signed consent form to allow institutions to review their social and economic information. Upon application through the foundations, the ISAS brings all the relevant data collected from the 28 institutions using the national identity number with guidance on which social assistance programs the individual or the household members fully benefit from, based on the observed characteristics. After the relevant information is documented through the ISAS, the staff visits to verify application information and assess living conditions. As of the end of 2021, SASFs employ 3,921 social assistance inspection officers to perform household visits, which are completed at least once annually. The SASF staff conducts a questionnaire that verifies the citizen's application information, collects additional household data, and makes further observations as

needed. This questionnaire is very similar to the Statistics on Income and Living Conditions (SILC) surveys conducted by Turkstat.[34]

The social assistance system is a hybrid one. At the same time, the ISAS produces a Proxy Means Test (PMT) that combines socioeconomic data, household characteristics, and geographical variables such as region of residence and whether the household is urban or rural. The system does not determine whether an individual or household should be granted assistance. The poverty scores provided by the ISAS are used as guidance for the staff, and the local SASF Board eventually makes the final decision on approvals and rejections of Trustees. The local SASF Board of Trustees consists of representatives of the municipality, several government units, philanthropist locals and NGOs, and the mukhtars/headman. In this regard, the local SASF Board of Trustees has complete autonomy in decision-making without any intervention from the Ministry. However, they are subject to the approval of the Ministry should they require additional funds for specific purposes such as food aid or emergency relief.

The individuals are notified about the final decision on their social assistance application by SMS. If the application is successful, they can receive payments i) through their declared bank accounts, ii) through the Postal and Telegraph Services Corporation (PTT) using their social assistance card[35], or iii) using the option of payment at home, introduced for beneficiaries who cannot go to withdraw their payments due to geographical conditions, weather conditions, illness, old age, disability. It should be noted that not to incentivize individuals to drop out of the labor force and rely on social assistance for living, the Ministry and SASF require that the applicants are evaluated in terms of eligibility for the Turkish Employment Agency employment programs, ISKUR.

ISAS has several modules to avoid errors and misuse of the system. A crucial module is the Central Risk Identification System, which automatically flags problematic inputs that violate certain thresholds and detect outliers. The system raises a flag if a SASF branch spends more than 2 percent of its monthly budget on one-time emergency social assistance or a significantly higher amount on social assistance than in the previous month (MoFSS and World Bank, 2017). Regular auditing is also a central aspect of ISAS. While the SASF inspection staff conducts regular in-person audits, the system produces 260 risk indicators and 88 service reports for the use of the inspection officers.

ISAS is a central part of data collection on poverty statistics. The system compiles data for around 57.7 million individuals across the country. The data system is integrated with geographic information system (GIS) mapping capabilities. It enables users and policymakers to produce maps on poverty, social assistance provision, and socioeconomic data at the finest administrative units. Thus, the administrative data it collects provides several opportunities to tackle poverty while improving

[34] Turkstat has been using SILC surveys since the year 2006 to measure poverty and income distribution in Türkiye. These surveys were implemented as a part of statistical harmonization with the EU.
[35] Social assistance cards are debit cards that can be used in ATMs or to purchase goods and services.

resource allocation in Türkiye. It also proved very efficient in delivering social assistance to needy households during the COVID-19 pandemic.

Technological Infrastructure

One of the critical factors for the smooth transition from a paper-based system to an integrated approach was that the Turkish Government had already put in place a system, the MERNIS (*Merkezi Nüfus İdare Sistemi*-Central Civil Registration System) in 2002, which provided a single national identification number for all citizens in Türkiye. Under the MERNIS project, all population registries were digitalized, and individuals' public records started being tracked through a single national identity number. In 2008, the E-Government gate was launched as a part of digital transformation in Türkiye. Before the e-Government, citizens had to apply to several public institutions separately for their needs. The e-Government gate centralized the institutions' public records, where all applications could be made electronically under one platform.

The MERNIS and the e-Government platforms facilitated the development of SAIS and ISAS. In the initial phase, the staff ensured that local Social Assistance and Solidarity Foundation branches and the General Directorate of Social Assistance buildings were connected on a virtual network using Virtual Private Network (VPN) technology. At the project's completion in July 2009, all foundation and General Directorate (GD) computers (numbered approximately 5,000) effectively started operating on the same network, and it has become possible to use Voice Over Internet Protocol (VOIP) technologies between the foundations and the GD buildings (MoFSS and World Bank, 2017). Furthermore, through the IP sets procured in July 2009, it has become possible to make free phone calls between these locations, which has offered significant advantages to the GD and foundations in terms of cost and data security (MoFSS and World Bank, 2017). The ISAS infrastructure allows access only through computers connected to the network. It is impossible to access the system through a computer not defined on this network, and the computers connected to the network are managed through centrally defined network security policies. The ISAS architecture was built on modules on a rolling basis and was completed in 2015. ***Figure 14*** summarizes the development phases of ISAS.

ISAS is based on strict data protection protocols. The legal basis for collecting sensitive individual data under the ISAS passed in 2011, long before the approval of the Personal Data Protection Law, No: 6698, in 2016. The data sharing and security rules of ISAS are significantly stricter than those under Law 6698. Hence, the system employs several processes to ensure data security. The system utilizes a two-factor authentication process, and users are given a token that generates a one-time password required for entry into the system, depending on the specific roles and responsibilities of the staff (MoFSS and World Bank, 2017). All queries made in the system are recorded with a barcode, which indicates what information was queried, by whom, and on what date. The system's hardware is also protected with security measures, and cameras and sensors monitor system rooms. Only authorized

staff are allowed to enter the system rooms and can do so only by using an electronic card and fingerprint verification. Data flow within the system is encrypted according to international standards (MoFSS and World Bank, 2017).

Success Factors and Challenges

Türkiye's ISAS is among the world's pioneer integrated social assistance systems. It is presented as a showcase by several international organizations, such as the World Bank. During the face-to-face interviews conducted with the MoFSS in April 2022, the staff highlighted that the Ministry regularly receives a demand for technical assistance to build similar integrated social assistance programs in several countries. Several factors led to establishment of a well-functioning and efficient integrated social assistance system.

The first success factor was the strong political will. Several different Ministries and public institutions wholeheartedly supported the digital transformation project of Türkiye. The development of ISAS was initiated by the Deputy Prime Minister, which helped provide the impetus for concluding key data-sharing agreements and partnerships across multiple institutions. It is usually challenging to establish cooperation and data-sharing protocols across public institutions in many parts of the world due to bureaucracy and competition for political interests. In the case of Türkiye, the conditions were just right; after completing the IMF Stand-by Arrangement, Türkiye recorded a strong rebound from the 2001 financial crisis thanks to crucial structural reforms. Although Türkiye was not particularly struck by the 2007-2009 Great Recession, increasing the effectiveness of social assistance programs emerged as a political priority in the global crisis environment. A majority political party finally ruled Türkiye after being ruled by coalitions for decades until 2002. The popularity of the Government, as well as the strong political leadership, facilitated the coordination and support for a significant transformation of how public services worked.

As highlighted in the previous section, the second success factor was the ongoing digitalization of population registries. The launch of the MERNIS system and unique national identity numbers were significant catalysts in building a unified portal for social assistance. Building on these efforts, Türkiye accumulated the know-how to centralize and integrate all relevant public institutions under one roof.

The third success factor, as highlighted by the MoFSS staff during face-to-face interviews, was that the software was developed by a pool of experts working under the same umbrella of social assistance. All the team at the General Directorate of Social Assistance, from the ones monitoring the social assistance programs to the legal experts, worked at arm's length with the in-house research and development engineers to build a user-friendly system, both for the practitioners of the system and the end-users. The staff was highly motivated. The modular approach to ISAS was also an advantage. On the other

hand, the General Directorate was relatively small back then, which entailed less bureaucracy and fast decision-making.

While ISAS is a stellar system, it still faces several challenges. Social assistance coverage has been increasing steadily over the years in Türkiye. In 2017, the system covered around 30 million individuals and now covers more than 57 million individuals. Not only the number of beneficiaries but also the number of social assistance programs have been increasing over the years, not to mention the number of integrated institutions. This means that technological requirements to maintain the security and efficiency of ISAS have been growing exponentially. ISAS is a real-time living system that is upgraded to meet changing needs. The COVID-19 pandemic has shown that governments need tools to respond to shocks swiftly, and the success of integrated systems is as good as the data it collects. It is essential to minimize fraudulent use and human or system errors and ensure data consistency.

Box.3. Turkey: Lessons Learned

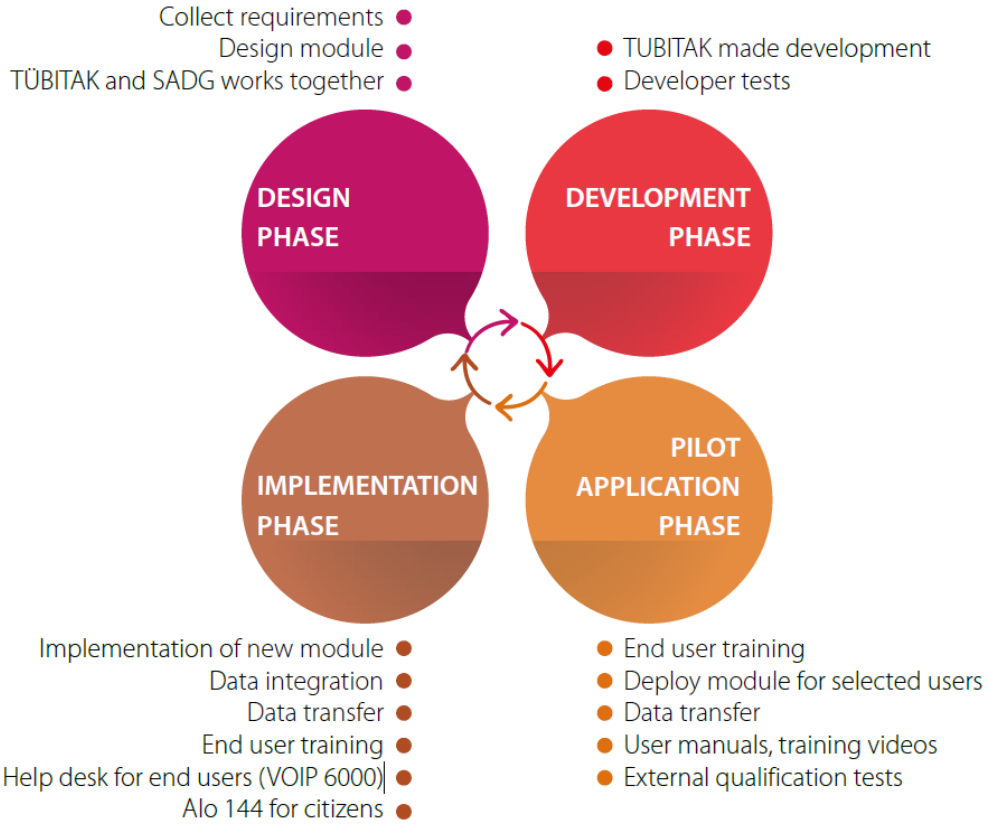
- *Political commitment and leadership are crucial in ensuring coordination among ministries and other relevant public bodies when moving to integrated systems.*
- *Digitalization of paper-based public accounts are key in establishing the basis for integrated systems. This step also helps accumulate know-how and increase technical capacity of agencies.*
- *Introducing unique national identity numbers for all citizens and launching platforms such as e-government facilitate moving into real time integrated systems to a great extent.*
- *Moving into electronic systems tremendously increase efficiency in terms of human and time resources.*

Table 7 Institutions integrated into Social Assistance in Türkiye

Ministry of Family & Social Policies
Social Assistance Directorate General
Conditional Cash Transfer for Education and Health
Income Generating and Social Services Project Information
Social Assistance Information (YBB)
Means Test Result
Home Care Salary
Child Services Directorate General
In-Kind/Cash Assistance
Foundations Directorate General
Neediness Salary
Dry Food Assistance
Ministry of Interior
Population and Citizenship Affairs DG
Certified Household Register Copy
Household Register Copy
Personal Register Copy
Incidence Information
Address Information
Provincial Administration DG
Terror Loss Compensation
Department of Data Processing
Temporary Rural Guard Salary Information
Ministry of Labor and Social Security
Social Security Institution
Social Security Information
Health Preauthorization and Entitlement Information

Ministry of Finance
Revenues Administration
Tax-Payer Status
Vehicle Ownership
Land Registry and Cadastre Directorate General
Immovable Property Ownership
Ministry of Agriculture and Rural Affairs
Farmer Registration System Queries
Ministry of Health
Family Medicine Information System Health Control Information
Ministry of National Education
School Attendance Information
Grade Transition Information
Higher Education Loans and Dormitories Institution DG
Scholarship and Loan Information
Ministry of National Defence
Military Service Status
Military Service Status of Disabled Citizens
Turkish Employment Agency (İŞKUR)
İŞKUR Register
Unemployment Insurance Allowance
Temporary Employment Allowance
Job Loss Compensation
Employment Activity Result
Ministry of Justice
National Judiciary Informatics System Alimony Information
Public and Private Banks
Bank account information

Figure 14 Modules and phases of Türkiye's ISAS



Source: The joint report by the Ministry of Family and Social Services and the World Bank (2017). https://documents1.worldbank.org/curated/en/515231530005107572/pdf/Türkiye-SA-summary.pdf

4.3 Case Study 2: Indonesia

Indonesia: Social Assistance at a Glance

Indonesia has had a similar experience in increasing the efficiency of the social assistance system, both in terms of timing and in terms of coverage, since the 2000s. Indonesia was one of the countries hit hard by the 1997 Asian Financial Crisis. The economy in Indonesia contracted by 13.1 percent in real terms in 1998 and recorded a weak growth of 0.8 percent in 1999; as a result, unemployment and poverty increased steeply. The poverty headcount increased from 23 million in 1996 to about 50 million in 1998, declining to 38 million in 1999 (World Bank, 2012). The Government of Indonesia launched a series of reforms between 2000 and 2004 to alleviate poverty and increase social protection. In particular, several new programs were implemented, such as unconditional cash transfers, subsidies for public transformation, and low-interest rates for small enterprises. As a result, poverty declined to 16.7 percent in 2004 but did not return to pre-crisis levels (World Bank, 2012). [36]

In 2005, the newly elected Government of Indonesia launched a medium-term development plan for 2005-2009, which included objectives for institutionalizing social assistance and improving program efficiency (World Bank, 2012). This plan specifically outlined goals to formulate a national social security system, improve consistency among social assistance policies, and improve the monitoring of social assistance services. National Development Plan Phase II between 2010–2014 targeted reducing national poverty levels from 14.1 percent in 2009 to 8–10 percent by the end of 2014. These programs consisted of three main components. The first component grouped individuals, families, or households under cluster 1 and aimed to provide fundamental rights, lessen life's burdens and improve the quality of life for the poor. Programs under cluster 1 included rice subsidies for low-income households, the Rice for the Poor program (referred to as the Raskin program), the Cash Transfers for Poor Students program (Bantuan Siswa Miskin – BSM), the public health insurance program (referred to as Jamkesmas) and the Conditional Cash Transfer Programme for Poor Families (Program Keluarga Harapan – PKH). Programs based on community empowerment were grouped into cluster 2, which aimed to develop and strengthen the capacity of poor communities. Cluster 2 includes the National Programme for Community Empowerment (known as PNPM) which operates at both urban and rural levels. And finally, the Government also targeted alleviating the credit constraints on micro and small

[36] World Bank. 2012. History and Evolution of Social Assistance in Indonesia. Social assistance program and public expenditure review no. 8,Public expenditure review (PER). Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/12259

enterprises under cluster 3 and launched the Credit for Businesprogramamme, Kredit Usaha Rakyat – KUR (TNP2K, 2015).

Building on these efforts, Indonesia's Unified Database (UDB), also known as *Data Terpadu Kesejahteraan Sosial (DTKS),* was officially established in 2011 as a medium-term development plan for 2009-2014. DTKS is an integrated beneficiary registry and monitoring system. It currently covers 25.7 million households nationwide (93 million individuals), approximately 40 percent of the population (UN ESCAP). The UDB was managed from 2012–2015 by the National Team for the Acceleration of Poverty Reduction (*Tim Nasional Percepatan Penanggulangan Kemiskinan* or TNP2K) under the office of the Vice President. In 2016, the UDB was transitioned to PUSDATIN, a Data Centre within the Ministry of Social Affairs (MoSA).[37]

Indonesia has a total population of 272 million. According to the Asian Development Bank (ADB) figures, the share of the population below $1.90 purchasing power parity (PPP, 2011) a day was about 2.2 percent as of 2021. Accordingly, 10.1 percent of the population will live below the national poverty line in 2021. ADB figures also suggest that the prevalence of malnourishment was about 6.5 percent between 2018 and 2020, while the prevalence of stunting among children under five was 30.8 percent in 2018. According to the World Bank's World Development Indicators, the Gini index was estimated at 37.3 by the end of 2021. There are also significant regional disparities across 34 provinces of Indonesia. The TNP2K report dated 2018 shows that the official poverty rate varied from 7.2 percent in urban areas to 14.5 percent in rural areas and from 0.16 percent in the particular capital region (*Daerah Khusus Ibukota* – DKI) of Jakarta to 17.6 percent in Papua. Nearly four in ten people (37 percent) living in poverty reside in urban areas.

Although Indonesia is among the top 17 economies in the world, the size of social protection is relatively small compared to countries with similar economic sizes. The total social protection in Indonesia was only 0.73 percent of the GDP in 2017 (TNP2K, 2018). Social protection consists of non-contributory social assistance and subsidized health insurance, with 0.55 percent of the GDP, and contributory employment insurance,e with 0.18 percent of the GDP. Non-contributory social assistance includes child grants, elderly grants, disability grants, food assistance,e and education assistance, such as graduation incentives. Contributory protection provides health insurance and employment insurance. Indonesia also has significantly lower social security compared to other Southeast Asian countries. According to the ADB, in 2012, social insurance was recorded as 0.4 percent

[37] Kemiskinan, T. N. P. P. (2018). The future of the social protection system in Indonesia: Social protection for all. *Retrieved June*, *20*, 2022.

of the GDP in Indonesia. In contrast, they were 1.8 percent in the Philippines, 4.4 percent in Singapore, 1.9 percent in Thailand, and 3.3 percent in Vietnam.

Figure 15 shows the institutional structure of social protection in Indonesia. Unlike in Türkiye, social assistance is not entirely centralized. The responsible central institutions for non-contributory social assistance in Indonesia are the Ministry of Social Affairs, Ministry of Education and Culture, and Ministry of Religious Affairs. On the other hand, Social Security Institution is the responsible public authority for health insurance. ***Table 8*** shows the details of each program with coverage and expenditure size. Although there is a wide range of social assistance programs, the number of beneficiaries and expenditures remains limited, considering Indonesia's population size and poverty rates.

While the overall coverage remained limited before the COVID-19 pandemic, the Government of Indonesia was able to outreach the vulnerable population during the pandemic. The Government committed to social protection measures, equivalent to 1.2 percent of the GDP, following COVID-19, making social protection the most significant component of its economic recovery package (Sparrow et al., 2020).[38] A survey conducted by UNICEF, UNDP, Australia-Indonesia Partnership for Economic Development (PROSPERA), and the SMERU Research Institute in 2021 shows that half of the households (50.8 percent) received a cash transfer during the pandemic.[39] The poorest households received the most assistance: 90 percent received at least one form of assistance (cash and in-kind), and 62 percent received cash assistance. This study which revealed the magnitude of the impact on the country's most vulnerable groups, involved face-to-face interviews with over 12,000 households across Indonesia's 34 provinces and is the largest COVID-19 impact survey in the region (UNICEF, 2021). The unified database, UDB-DTKS, was used to a varying degree across programs, which are displayed in Table 4.5 based on the information provided by UN-ESCAP (2019).

Indonesia's Uniform Database on Social Welfare (UDB)

The Unified Database (UDB) contains the names, addresses, and socioeconomic data for approximately 40 percent of the Indonesian population. Information in UDB was initially based on the updated Data Collection for Social Protection Programmes (PPLS) carried out by the National Statistics Agency of Indonesia in 2011 and was built on the 2010 census. The PPLS (2011) included 26 variables on

[38] Robert Sparrow, Teguh Dartanto & Renate Hartwig (2020) Indonesia Under the New Normal: Challenges and the Way Ahead, Bulletin of Indonesian Economic Studies, 56:3, 269-299.

[39] UNICEF, Press Release, 4 March 2021. Retrieved June 12, 2022.

individual and household characteristics (TNP2K, 2015). These variables provided information on demography, education, employment, health status, and quality of dwelling, similar to the Statistics on Income and Living Conditions (SILC) of Türkiye and the European Union.

Table 8 Social protection programs, coverage, and expenditures in Indonesia, 2017

Scheme	Description	Responsible Institution	Number of Beneficiaries	Expenditure (% of GDP)
Non-Contributory Social Assistance				
Rice subsidy for the poor (Rastra /Raskin)	Social assistance/ poverty targeted/in-kind transfer	Ministry of Social Affairs	14,212,747 families	0.18%
Non-cash food assistance program/ Bantuan Pangan Non-Tunai (BPNT)	Social assistance/ poverty targeted/in-kind transfer	Ministry of Social Affairs	1,286,000 poor families in 44 districts	0.01%
Conditional cash transfer program/ Program Keluarga Harapan (PKH)	Social assistance/ poverty targeted/ cash transfer	Ministry of Social Affairs	5,981,528 families and 12,075,201 individual beneficiaries	0.08%
Education cash transfer program for poor and at-risk students /Program Indonesia Pintar (PIP, formerly Bantuan Siswa Miskin – BSM)	Social assistance/ poverty targeted/ cash transfer	Ministry of Education and Culture, Ministry of Religious Affairs	19,718,144 individuals	0.08%
Social assistance for the elderly / Asistensi Sosial Lanjut Usia (ASLUT)	Social assistance/ poverty targeted/ cash transfer	Ministry of Social Affairs	30,000 individuals	0.0006%
Social assistance for people with severe disability/ Asistensi Sosial Penyandang Disabilitas Berat (ASPDB)	Social assistance/ poverty targeted/ cash transfer	Ministry of Social Affairs	22,500 individuals	0.0008%
Social welfare program for poor children /Program Kesejahteraan Sosial Anak (PKSA)	Social assistance/ poverty targeted/ cash transfer	Ministry of Social Affairs	77,430 children	0.0034%

Eliminating child labor through PKH/Penarikan Pekerja Anak – Program Keluarga Harapan (PPA-PKH)	Social assistance/ poverty targeted/ cash transfer	Ministry of Manpower	17,000 children (6,000 children from the national budget; 11,000 children in collaboration with local NGOs and corporate social responsibility activities)	0.0002%
Subsidized national health insurance/ Penerima Bantuan Iran – Jaminan Kesehatan Nasional (PBI-JKN)	Social insurance (health insurance, non-contributory for the poor)	Social Security Agency for Health	92,400,000 total active members	0.20%
Contributory Social Assistance				
Social Security Agency for Employment / Badan Penyelenggara Jaminan Sosial (BPJS) Ketenagakerjaan	Social insurance for private sector workers (pension/Jaminan Pensiun (JP), disability, widow/er/Jaminan Hari Tua (JHT), work accidents/Jaminan Kecelakaan Kerja (JKK), and survivors' benefit/ Jaminan Kematian (JKM))	Social Security Agency for Employment /BPJS Ketenagakerjaan	Total active: 24,096,776 members. Work injury and life insurance: 24,096,776 members. Old age and disability insurance: 14,322,418 members. Pension members: 10,306,561 members	0.06%
Old age savings scheme for civil servants / Program Tabungan Hari Tua Pegawai Negeri (PT Taspen)	Social insurance for civil servants (pension, disability, widow/er, work accidents)	PT Taspen	6,700,000 total active members	0.04%
Social insurance for Indonesia's military, police, and civil service under the Ministry of Defence / Asuransi Sosial Angkatan Bersenjata Republik Indonesia (PT Asbari)	Social insurance for employees of the military, police, Ministry of Defence (pension, disability, widow/er, work accidents)	PT Asabri	936,835 total active members	0.01%

Source: Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K), 2018

Table 9 Use of Unified Database vis-à-vis COVID-19 non-contributory social protection measures (UN-ESCAP)

Program	No. of beneficiaries (Pre-COVID)	No. of beneficiaries (COVID-19 expansion)	Duration	Target group registered in the UDB - DTKS
PKH CCT	9.2 million	800,000	12 months	Yes
Sembako food voucher	15 million	5 million	12 months	Yes
Cash Transfer (Outside Greater Jakarta)	New program	9 million	Nine months, Apr-Dec 2020	Yes
Temporary food voucher (Greater Jakarta)	New program	1.8 million	Nine months, Apr-Dec 2020	No
BLT Dana Desa Unconditional cash transfers from the Village Fund	New program	11 million	Six months, Apr-Sep 2020	Partial
Kartu Praja Conditional cash transfers for beneficiaries of the Pre-Employment Card Program	5.6 million*	Same as before, 5.6 million	Cash incentive component for four months	No

Source: Social Toolbox by United Nations ESCAP, 2019 https://www.socialprotection-toolbox.org/practice/facilitating-covid-responses-data-terpadu-kesejahteran-sosial-dtks

Upon submission of the PPLS data to TNP2K, the responsible institution for the social assistance database, the welfare status of each household was indexed using the information in PPLS 2011 and the proxy means testing model. TNP2K developed regional and city-specific testing models, which helped sort households from lowest to highest according to welfare status. The information processed from PPLS 2011 provided the source data to develop a Unified Database for Indonesia's social protection programs that came into effect in March 2012 (TNP2K, 2015). The authorities aimed to improve program targeting (Presidential Instruction No. 1/2010 on the National Development Priority) and improve complementarities between social assistance programs (Barca, 2017). Following four rounds of census-survey data collection (2005, 2008, 2011, and 2015), on-demand

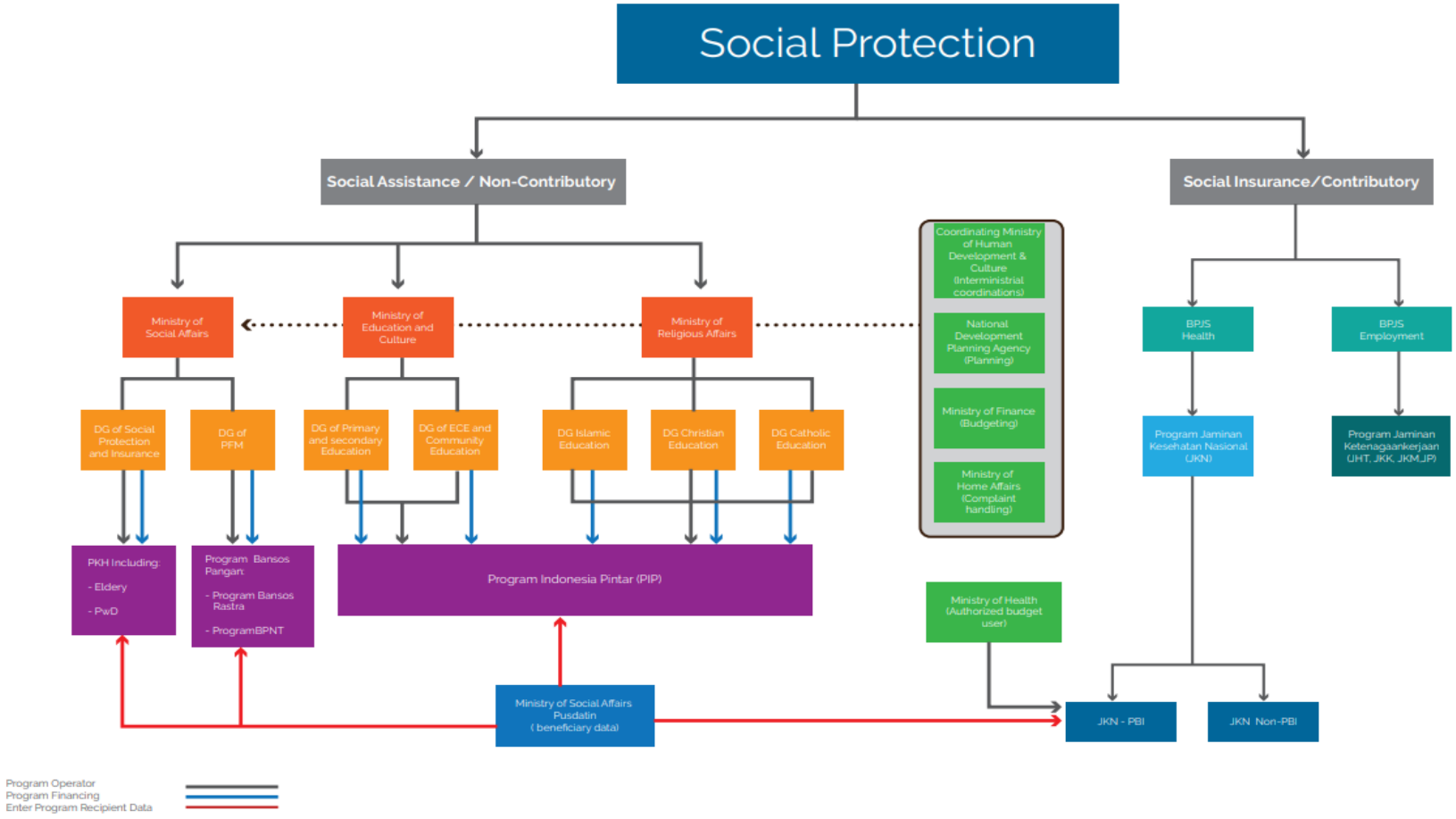
approaches to registration were piloted in 2016-2017. These are currently being rolled out nationally via a Ministry of Social Affairs Decree that entrusts the UDB updating, verification, and validation process to the local Government.

In the current form, UDB classifies households into deciles and contains deciles 1, 2, 3, and 4 because it includes the 40 percent of households that are economically the least well-off in Indonesia. The UDB is used for two purposes, i) planning/analysis of social protection programs and ii) targeting beneficiaries, monitoring, and evaluation. The system retrieves information at the aggregate level and data without the identity of the individuals for planning purposes. Conversely, the system can also retrieve private individual information if the goal is to reach out to beneficiaries or monitor existing social assistance. UDB produces data upon request, which takes about 15 working days (TNP2K, 2015).

National Statistics Agency is the responsible government agency for providing data on individual and household wealth through censuses, national surveys, and potential village surveys. In contrast, sub-national governments are responsible for updating quarterly. One of the weaknesses of the UDB is that the system is not actively linked with any other government databases. For instance, The UDB-DTKS was last updated in 2015, as suggested above, although sub-national governments are responsible for updating quarterly. Only 113 of the country's 514 municipalities and regencies had updated their data as per the latest estimates.[40] The Government has announced on several platforms that it has been one of the Government's top priorities to move to a fully integrated system linked with the national ID database at the Ministry of Home Affairs. To this end, the Government of Indonesia has passed several regulations to facilitate the transition to a fully integrated system.[41] As of May 2022, the Government launched a new mobile application called the *Cek Bansos*. Individuals can access the application through a user ID and participate in a dashboard through the "propose" and "rebuttal" features. The authorities aim to increase accuracy in the distribution of Social Assistance.[42]

[40] https://www.socialprotection-toolbox.org/practice/facilitating-covid-responses-data-terpadu-kesejahteran-sosial-dtks
[41] See for instance, http://ogi.bappenas.go.id/index.php/en/Komitmen_XI
[42] See, https://kemensos.go.id/en/the-application-of-cek-bansos-an-innovation-of-mosa-that-involves-the-community-for-the-right-targeted-management-of-social-assistance

Figure 15 Structure of the social protection system in Indonesia



Source: Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K), 2018

How Does UDB Work?

The UDB data is stored using a Microsoft SQL server, but it does not currently link to other servers or web services for remote access (Barca, 2017). Transfer of data between TNP2K and other government institutions has been done manually using CDs. Data containing the names and addresses of individuals in the UDB are only issued to government agencies (central and local) that organize social assistance programs (TNPK, 2015). Whenever there is a need for data, Ministries or local governments send written requests to the Ministry of Social Affairs detailing the type of data needed; UPSPK retrieves the data and sends it back in Excel format by email or on disk (Barca, 2017). For data requests requiring private individual data, an applicant must submit an application letter to the Ministry of Social Affairs, which interviews the applicant to clarify the details of the data requests. Data is then extracted and packaged in CD format for submission to the applicant with an accompanying cover letter (Barca, 2017).

Indonesia has strict regulations on data privacy.[43] By article 15, paragraph 1 of Government Regulation no. 82 of 2012 on Implementing an Electronic Transaction Management System, "*the management unit must ensure that all data concerning an individual's name and address remain confidential and that the acquisition and use of names and addresses of individuals are with the consent of the owner of the private data*" (TNPK, 2015). The Memorandum of Cooperation Agreement (for the ministries and ministry-level agencies) and the Letter of Declaration (for local government agencies) ensure that government agencies that access data containing the names and addresses of individuals in the UDB must take responsibility for maintaining the integrity and confidentiality of the individual data (TNPK, 2015).

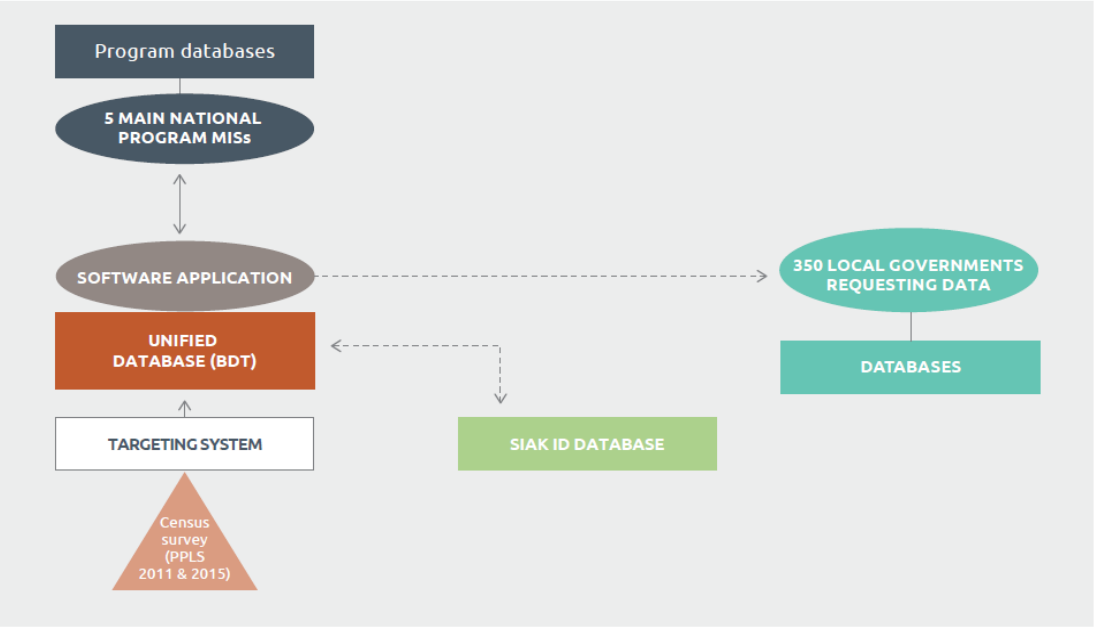
Challenges

Since UDB is not a fully integrated, live system, one of the biggest challenges concerning maintaining UDB has been data updating, especially for those programs that target categories or people with 'volatile' status, such as the PKH, i.e., programs targeting school-aged children and pregnant women (Barca, 2017). This creates significant inefficiencies and limits the Government's ability to act swiftly to reach out to beneficiaries in case of shocks and natural disasters. On the other hand, managing large amounts of data and meeting high accountability standards requires staff with unique skills and competencies. A review of the UDB by Barca (2017) suggests that program managers and local governments have shown attitudes of 'complacency' and resistance to the changing approach to targeting in the country. At the same time, there has been a significant number of data and technical support requests from local governments, meaning there is strong demand for an accessible and up-

[43] Law No.11/2008 on information and electronic transaction and Law No. 14/2008 on public information disclosure

to-date social assistance database (TNP2K 2015). Indonesia is a large country with several remote regions. Hence collecting data through surveys creates significant lags and inefficiencies in delivering social assistance.

Figure 16 Structure of UBD



Source and note: Barca, (2017). As explained by Barca (2017), boxes indicate databases; circles indicate MISs; bold lines indicate direct links (e.g., web service access); dotted lines indicate indirect links (batch process, CDs, etc.); arrows indicate where information flows in one direction or two directions.

Box.4. Indonesia: Lessons Learned

- *Countries can build partly integrated systems however, real time systems based on administrative data as opposed to survey data can be more effective in times of shocks or sudden crises.*
- *Coordination with local authorities' or municipal databases are crucial when countries have significant number of individuals residing in remote or rural areas for the effectiveness of social assistance.*
- *Size of the country matters for establishing efficient systems. For countries with large populations, targeting and maintaining the social registry might be harder.*

4.4 Case Study 3: Sudan

Country Background

Located at the intersection of Sub-Saharan Africa and the Middle East, Sudan has faced extensive conflict for most of its independent history. Following the disintegration of the Addis Ababa Agreement, the North and South civil war began over resources, power, and self-determination.[44] Violent conflicts coupled with impunity have displaced many Sudanese internally. However, others fleeing violence from neighboring countries, such as Syria, Yemen, and Eritrea, have also found refuge in Sudan. Sudan hosts one of the largest refugee populations in Africa. The latest numbers reveal that approximately 1,138,996 people are refugees and asylum seekers in Sudan, while 61 percent of this population is outside of camps, and only 39 percent is settled in camps where 3,306,593 people are recorded to be internally displaced.[45]

Per World Bank resources, the incidents of persistent conflict leading to South Sudan's succession have caused multiple economic shocks, including the loss of oil revenue, which accounted for more than half of Sudan's government revenue and approximately 95 percent of Sudan's exports, triggering unrest in 2013.[46] Consistent upticks further fueled this unrest in food prices, followed by enduring grievances, which eventually led to the formation of a transitional Government supporting ambitious economic and social reforms. In this light, as the International Monetary Fund has shared in their country brief, Sudan has prioritized (1) achieving internal peace based on inclusion, regional equity, and justice; (2) removing economic distortions and stabilizing the economy, and (3) building a foundation for future sustained inclusive growth, development, and poverty reduction.[47] The transitional government has strengthened its relationships with international organizations and has made commitments to sufficiently implement its entire Poverty Reduction Strategy for at least one year, as decided in 2020. This decision highlights the importance of relevant social registries, social protection mechanisms, and relevant systems.

Sudan's National Development Strategy through the Lens of Social Protection

The National Development Strategy (NDS) is the first national planning document following the South Sudan Development Plan (SSD), which expired in 2016. The strategy is anchored by guiding principles such as (i) peace, security, and the rule of law, (ii) democracy and good governance, (iii) socio-

[44] United Nations Mission in the Sudan Background Briefing https://peacekeeping.un.org/en/mission/past/unmis/background.shtml, *accessed 6/16/2022*
[45] UNHCR Refugee Situations Operational Data Portal, https://data.unhcr.org/en/country/sdn, *accessed 6/16/2022*
[46] The World Bank in Sudan, https://www.worldbank.org/en/country/sudan/overview, *accessed 6/16/2022*
[47] International Monetary Fund Sudan Overview, https://www.imf.org/en/Countries/SDN *accessed 6/16/2022*

economic development, and (iv) international compacts and partnerships. Especially under the socio-economic development pillar, the Sudanese government spotlights inclusive and equitable growth through service delivery and social safety nets for the vulnerable.[48]

Acknowledging their gaps, the Sudanese government in the NDS has identified that decades of civil war and renewed fighting had negatively impacted the country's service delivery structure, forcing the government to operate under high illiteracy, lack of basic health infrastructure, extreme poverty, food insecurity, gender-based violence and a large number of displaced populations amongst other struggles including forced child soldiers and a struggling economy. To provide immense relief, the Sudanese government pinpointed key issues in hopes of clearly identifying weak systems. An inadequate enabling framework for management coordination, monitoring, and evaluation of social services was a potential bottleneck. This indicated a weak system under information technology, monitoring, and evaluation. For this purpose, the Sudanese government created a social services cluster. The goal of this cluster was to establish a robust, equitable social service system and partnership that is sustainable and accountable. The clusters comprised Education, Health, and Social & Humanitarian Affairs sectors gathered under strategic objectives encompassing priority areas such as creating a cohesive social service system and effective coordination mechanisms; increasing inclusive access and coverage in the social service; expanding and improving social infrastructure; promoting partnership among all stakeholders and strengthening human and institutional capacity for efficient and effective social services.

In this light, the social cluster developed a results framework focusing on two outcomes; (1) fostering a robust social service leadership and policy environment combined with (2) adequate coverage and inclusive access to social services. The Sudanese government further acknowledged that for the population in South Sudan, service delivery often happened at the local level, which is why it was also essential to ensure coordination, especially amongst education, health, small-scale infrastructure, and water services, so that public services could be *"productive and good quality for the welfare of the entire society."*[49]

[48] Republic of Sudan National Development Strategy, Consolidate Peace and Stabilize the Economy, http://www.mofep-grss.org/wp-content/uploads/2018/11/NDS-4-Print-Sept-5-2018.pdf *accessed 6/17/2022*
[49] Ibid.

Table 10 Social service cluster results framework in Sudan

Outcomes	Measures (indicators)	Baselines	3-year targets	Means of verification
Adequate coverage and inclusive access to quality social services are provided	% of the population accessing inclusive and quality social services	44%	60%	EMIS, DHIS, SSHHS
	% of human resources capacitated	13.5%	27%	EMIS, DHIS, SSHHS
Social services leadership and policy environment are strengthened.	% of the national budget allocated to social services	5%	15%	Analysis of the National and state budgets/outturns
	Number of policies promulgated, implemented, monitored, and evaluated	75%	100%	Tracking matrix of critical policies

Source: Republic of Sudan National Development Strategy. Note: EMIS is Education Management Information System; DHIS stands for District Health Information System, and SSHHS stands for South Sudan Household Health Survey.

Sudanese Definition of Social Protection

The state-provided social scheme is a familiar concept for the Sudanese government. Sudan recognizes the State's role in realizing social development through providing education, social insurance, healthcare services, and housing.[50] Traditionally, Sudan has experience providing essential services, like health and education, income, and consumption of goods to poor and marginalized communities. Through its system of government, working within the framework of a federal representative democratic republic, where the *Federal governme*nt is responsible for national-level functions such as defense, monetary and fiscal policies, and overall financing of larger projects, the *State governme*nts are responsible for secondary education, procurement and distribution of textbooks, healthcare services in hospitals, agriculture development and minor maintenance of small water schemes and the *Local governments* are mainly responsible for pre-school and primary education, management of primary healthcare, collection of taxes and maintaining environmental sanitation, the commitment to social welfare was adopted in the Constitutional Declaration.[51]

[50] Bilo C., Machado C.A., Bacil F. (2020) Social Protection in Sudan: System Overview and Program Mapping *the International Policy Center for Inclusive Growth ISSN 2318-9118.*
[51] Ibid.

Leading Institutions Related to Social Protection and Provision in the Sudanese Government

Social Protection

With the establishment of the interim government, institutional reform was put into place where the ministries of Labor and Social Security & Development were combined into one entity. Currently, the Ministry of Labor and Social Development (MoLSD) is the leading institution responsible for social protection policies. The Ministry's objective is to achieve human and social security, reduce poverty, and promote a society that fosters and preserves the rights of older people, orphans, persons with disabilities, and vulnerable groups.[52] Examples of social protection schemes in Sudan include;

Table 11 Basic social protection policies in Sudan

Program	Example	Aim	Target Audience
Social Insurance	Pension System -The National Pension and Social Insurance Fund (NPSIF)-	To ensure a minimum income	Old age population
	Health Insurance - The National Health Insurance Fund (NHIF)-	To protect the well-being of households in the face of adverse events	All populations
Social Assistance &Support	Shamel- Integrated Program for Social Support-	A flagship cash transfer program led by MoLSD and the Commission for Social Safety and Poverty Reduction providing livelihood projects	Poor communities and households
	National Students Welfare Fund	system to support students to access higher education in Sudan	Low-income students
	Zakat Fund	Mandatory contributions for wealth distribution and productive building capabilities in the Islam community	Poor communities and households

Source: World Bank

[52] Ibid.

The Ministry of Education (MoE) aims to provide all free and compulsory primary education, as reflected in the twenty-five-year national strategy encompassing 2017-2031. The resources, such as the MoE website, are lacking in providing programmatic updates; however, UNICEF has reported that conflict, a lack of awareness about the importance of education, and chronic under-development have all contributed to the poor schooling of boys and girls in Sudan.

The 2021 Education Annual Report published by UNICEF has also found that around 3 million children did not go to school. Significant disparities were observed in the eighteen states in Sudan, where most of the vulnerability piles around girls and children affected in conflict areas and refugee zones. However, the report was able to share that despite needed improvements, between 2008-2018 total number of schools (public and private) increased by 2,800, allowing 1 million more children to access education.[53]

Health

The Ministry of Health (MoH) is responsible for providing nutrition and health care services for the health insurance scheme and works on reducing maternal and child mortality and malnutrition. It also includes the Medical Supplies Corporation, which procures medicines. Between 2012-2016, the National Health Strategic Plan focused on inclusivity and equity in access and utilization of healthcare services by improving/ensuring the quality and efficiency of hospital services and ensuring social protection by increasing health insurance coverage, reducing reliance on out-of-pocket payments, and provision of universal minimum package.[54]

Gender, Equity, and Women Empowerment

The General Directorate for Women and Family is responsible for developing inclusive policies for women, which include topics like maternal safety and enhancing the role of women in society. This Directorate is also responsible for drafting and introducing laws that would progress the entirety of all women's issues. The World Bank Women, Business and Law index[55], however, has scored Sudan 29 (women have about 29% of economic rights relative to men) out of 100. This score is considered

[53] UNICEF Sudan Education Annual Report, March 2021, https://www.unicef.org/sudan/media/8546/file/UNICEFpercent20Sudan-Education-percent20Reportpercent20(2021).pdf *accessed 6/23/2022*

[54] Ministry of Welfare and Social Security National Population Council Sudan National Voluntary Report https://www.un.org/en/ecosoc/newfunct/pdf14/sudan_nr.pdf , *accessed 6/23/2022*

[55] Women, Business and the Law 2021 presents an index covering 190 economies and structured around the life cycle of a working woman. In total, 35 questions are scored across eight indicators (mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets and pension). Overall scores are then calculated by taking the average of each indicator, with 100 representing the highest possible score, meaning full legal equality between men and women. Data refer to the laws and regulations that are applicable to the main business city (Khartoum).

lower than the Sub-Saharan Africa average of 71.[56] The constraints on freedom of movement, laws affecting women's pay, and issues in national childcare creating obstacles around women's decision to return to work after they have children have negatively affected this score. Overall, gender differences in property and inheritance also show that much improvement is needed. These legal impediments lead women to be excluded from formal employment. As women are not registered as legal workers, they also do not have the right to register with social security and protection systems which causes them to be further isolated from such safety nets.

Added Perspective on Administrative Records, Monitoring, and Evaluation

Cash Transfer Programs

Introduced in 2011 via the Social Initiatives Program (SIP) and after the succession of South Sudan, cash transfers (CT) were a response to economic shocks triggered by the civil war. The transfers aimed to reduce the burden of families with limited income, ensuring a minimum standard of living. A March 2020 report published by the World Bank Group estimates that the form of direct government support reaches approximately 500,000 of the 2,289,000 poorest households identified by the Zakat Chamber in 2011.[57] In 2019, a study reported that the program had expanded rapidly since its creation, targeting approximately 600,000 households (about 9 percent of all households) across all Sudanese states.[58]

The World Bank report has stated that the transfer programs are poorly targeted across Sudan. Some states like Khartoum and Gezira seem to have considerable cash transfer programs despite low poverty rates. On the other hand, states like Darfur and Kordofan face higher poverty rates but are worse off regarding programming. The report has also emphasized the coverage of cash transfers. The residents of Darfur and Kordofan are reported to be significantly worse off in terms of coverage than the rest of the country despite the poverty rate varying from 65 percent to 77 percent. Moreover, it has been stressed in the same report that the targeting accuracy of the programs has also been off in terms of the bottom percent of the population being accounted for.

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[56] World Bank Women, Business and Law Index (2021) https://wbl.worldbank.org/content/dam/documents/wbl/2021/snapshots/Sudan.pdf , *accessed 6/25/2022*

[57] Alvin E. N., Fareed H., Eiman O. (2020) Is the Sudan Cash Transfer Program Benefiting the Poor? Evidence from the Latest Household Survey *the World Bank Group Poverty and Equity Global Practice, Africa Report.* https://openknowledge.worldbank.org/bitstream/handle/10986/36081/Is-the-Sudan-Cash-Transfer-Program-Benefiting-the-Poor-Evidence-from-the-Latest-Household-Survey.pdf?sequence=1&isAllowed=y *accessed 6/25/2022*

[58] Bilo C., Machado C.A., Bacil F. (2020) Social Protection in Sudan: System Overview and Program Mapping Mapping *the International Policy Center for Inclusive Growth ISSN 2318-9118.*

The mapping study conducted by Bilo et al. shares that the cash transfer program does have a monitoring and information system (MIS) where relevant information is stored in Oracle with a centralized poverty registry targeting and eligibility module, a grievance redress module, a payment module, and a monitoring and evaluation module. The main level work is computerized, but the local level work is still collected through paper.

Shamel

These programs aim to generate a social shift from consumption to production with the help of enhancing social security nets. This program was introduced in 2016 to pilot states but scaled up to the national level. The Shamel program aims to eradicate poverty within the most vulnerable population. Shamel differentiates itself by being a community-driven program built on four pillars

(1): Livelihood projects such as skills training

(2): Water projects, such as irrigation projects

(3): School meals, such as providing school meals for primary education

(4): Supporting community awareness initiatives.

All of the mentioned projects are community demand-driven, where a detailed project proposal is submitted at the beginning of each program phase. Data is collected through implementation reports, field visits, and relevant reports. The beneficiaries are selected through a household survey.

Zakat Foundation

This foundation is considered the most comprehensive, as it assists in many forms. This system has an electronic database storing information on both beneficiaries and non-beneficiaries. This particular electronic system is also used in the central area with limited access to this database in local communities. It seems that the Zakat Foundation is trying to develop its MIS by adding fields to track the number of household members receiving benefits, types of services provided, and beneficiary ID numbers for future use. However, at this point, the additions are being tested out in select pilot cities.

National Health Insurance Funds

The NHIF is the primary health insurance provider in Sudan. The NHIF is constantly increasing its coverage through both contributory and non-contributory schemes, intending to reach its objective of covering 80 percent of the population in 2020. With the NHIF and health insurance card, beneficiaries are eligible for several services at public and private facilities based on predefined criteria. However, one of the challenges of the NHIF is the provision of drugs. The failure of the Sudanese industry to supply the agreed quantities and the weak response of some pharmaceutical companies to the request

of the Committee to provide direct offers and prices it deems appropriate has been the central issue of this problem. The NHIF keeps a web-based database with its members' data and coverage information. The database includes information on the household head and family members, including identity number, date of birth, address, nearest health care providers, and type of insurance scheme (self-employed, 'poor'/non-contributory.

National Pension and Social Insurance Fund

The aim is to build an effective social security system and provide comprehensive social protection through insurance coverage for old age, injury, and death. Pensioners also have the chance to apply for microfinance and tools. However, there is still low coverage in the private sector, including loans and services to reduce poverty among pensioners and their families.

National Health Insurance Fund (NHIF)

This contributory and non-contributory insurance system covers 27 million individuals (68 percent of the population) and is mandatory for the formal sector. NHIF has the highest coverage among all Sudan programs, while it has the highest degree of reliance on MIS. NHIF collects regular data on individual information on beneficiaries, including name, amount of the pension, disbursement office, and dependents. Information in the databases can be accessed at the local/branch level.

National Students Welfare Fund (NHIF)

This program offers Sudanese students sponsorships, loans, housing, and social welfare programs. Currently, approximately 13,000 students benefit from loans, 40,950 students benefit from sponsorship, and 148,438 students benefit from social welfare programs.

Box.5. Sudan: Lessons Learned

- *Certain OIC member countries are face disproportionately more challenges associated with catastrophes such as floods, droughts, conflicts, displacement and inflation. A significant proportion of the population in countries like Sudan are more vulnerable to rising extreme poverty and such countries need even stronger social assistance delivery methods.*
- *International community has helped and can further help Sudanese people's efforts to alleviate poverty but the international support should focus on improving real-time and effective social delivery as much as focusing on increasing finance.*
- *Even the most vulnerable countries can establish the building blocks of effective social delivery.*

4.5 Case Study 4: Tunisia

Tunisian Social Assistance System at a Glance

According to the World Bank's classifications, Tunisia is a lower middle-income country with an income per capita of 3,924 USD, and its population is approximately 12 million (as of 2021). The poverty headcount ratio at $1.90 a day (2011 PPP) is 0.2 percent of the population (percent of the population), and the poverty level is well below the average of 10.9 percent in other countries under the World Bank's lower middle-income category (as of 2018). The social protection system in Tunisia is generally considered to be amongst the more advanced and protective models in the Middle East and North Africa (MENA) region (The Center for Social Sciences Research and Action, 2022). The World Social Protection Report by International Labour Organization (2021) shows that Tunisia has more robust social protection than other countries, with 50.2 percent of the population covered by at least one social protection benefit. Total expenditure on social protection (excluding health) as a percent of the GDP is 7.5 (ILO, 2021).

The Tunisian social protection system offers contributory schemes, non-contributory programs, and other *ad hoc* service provisions. Private sector social security is regulated through the National Social Security Fund (*Caisse Nationale de Sécurité Sociale* – CNSS), while the National Pension and Social Insurance Fund (*Caisse Nationale de Retraite et de Prévoyance Sociale* – CNRPS) covers the public sector (*Center for Social Sciences Research and Action*, 2022). These schemes provide coverage for only the formal workers. The non-contributory programs, on the other hand, offer universal and ad hoc provisions. Tunisian state provides universal subsidies on essential items such as food, fuel, and gas through the General Compensation Fund (*Caisse Générale de Compensation* – CGC). Some programs target the poorest populations regarding health, housing, education, minimum income, and employability grants (*Center for Social Sciences Research and Action,* 2022). As in many other countries, Tunisia offers permanent cash transfers to needy families through the large-scale National Program for Needy Families (*Programme National Aux Familles Nécessiteuses* – PNAFN). ***Table 12*** summarizes the social assistance programs in Tunisia.

Tunisia launched its most extensive poverty reduction program, the "Amen Social," on January 30, 2019. Amen Social constitutes the basis of a national strategy to reduce poverty and targets individuals or families suffering from multidimensional poverty, including the deprivations related to health, education, housing, access to public services, and living conditions. The responsible public body for Amen Social is the Ministry of Social Affairs. The Law mandates that the Amen Social program introduces the necessary policies and means to i) guarantee the right to a minimum income, ii) provide

decent living conditions for the poor, iii) improve access to education and health for all, iv) promote equality of opportunity, fight exclusion, and establish social justice.

According to World Bank's figures, Amen Social covered 265,000 *poor* households (8 percent of the total population) and 620,000 vulnerable and low-income households (20 percent of the total population) in 2021. The social benefits provided to the poor households include: (i) the free health card (AMG1) to access medical care at public health centers at no charge; (ii) a monthly Permanent Cash Transfer of TND 180 (US$64); (iii) a supplemental Family Allowance of TND 10 (US$3.5) for each child 0-18 years old, and a monthly Family Allowance of TND 20 (US$7) for each child living with disabilities; (iv) back-to-school allowances of TND 50 (US$18) for each child in primary and secondary school and of TND 120 (US$43) for each university student; (v) a religious celebration aid of TND 60 each (US$21 each) for Ramadan, *Aïd al-Fitr*, and *Aïd al-Idha*; (vi) on-demand allocation of financial and material resources to encourage and support beneficiaries to engage in income-generating activities to facilitate economic and social inclusion; and (vii) one-off assistance (e.g., in-kind benefits) or Temporary Cash Transfers. Social benefits provided to vulnerable and low-income households include: (i) the subsidized health card (AMG 2) to access medical care in public health centers for a fixed annual fee (fiscal stamp) of TND 10 (US$3.5); (ii) back-to-school allowances of TND 50 (US$18) for each child in primary and secondary school, and of TND 120 (US$43) for each university student; and (iii) one-off assistance (e.g., in-kind benefits) or Temporary Cash Transfers. In 2021, the annual cost of the AMEN Permanent Cash Transfer program was US$229 million (0.6 percent of GDP), representing 88 percent of the program's total budget (World Bank, 2022).[59]

Table 12 Social Assistance in Tunisia

Non-Contributory Social Assistance	**Coverage**
National Aid Programme for Families in Need (PNAFN)	884,090 households
Free Medical Assistance program (AMG1 and AMG2)	620,000 households
Family Allowance for children (0-5 pages) of poor households	117,685 households
School Allocation Programme (PPAS)	-
Back-to-school education benefit	-
National School Meals Programme	-
Contributory Social Assistance	
National Employment Fund (FNE)	-
National Social Security Fund (CNSS)	81 percent of private sector workers
National Pension and Social Insurance Fund (CNRPS)	91 percent of public sector workers

Sources: [a] World Bank, 2022; b UNESCWA, 2019; c UNESCWA, 2016

[59] Source: World Bank-Tunisia COVID-19 Social Protection Emergency Response Support Project, March 2022.

Ministry of Social Affairs distributes social assistance through a hybrid system of traditional and electronic applications. The system can be considered an "on-demand" system. Once a family makes an application for social assistance in need, local Ministry of Social Affairs offices help control the application and validity of the information provided by the family through household visits. In total, approximately 1500 social workers are employed at 297 local offices of the Ministry.[60] Then the Ministry uses a scoring model and proxy means test based on the deprivation dimensions of income, health, education, housing, access to public services, and living conditions. The Ministry decides whether to approve the application based on this scoring model.[61]

Amen Social has been instrumental in fighting the effects of the COVID-19 Pandemic. Since the outbreak of the Pandemic, approximately 900,000 households have received COVID-19-related assistance payments. Furthermore, the Tunisian government has successfully issued vaccination identity cards for almost 80 percent of the population. According to World Bank figures, in 2020, extreme poverty—measured using the international poverty line of living at US$1.90 per day—remained below 1 percent in Tunisia; and yet, poverty measured within the US$3.20 per day bracket was estimated to have increased from 2.9 percent to 3.7 percent due to the economic effects of the Pandemic. Using US$5.50 per person per day, the number of poor and vulnerable together is expected to have increased from 16.7 percent to 20.1 percent of the country's total population of about 11.7 million (World Bank 2021).

On the other hand, National Institute of Statistics (*Institut National de Statistiques* – INS) figures show that in 2021 the unemployment rate was recorded as 16.8 percent, while the unemployment rate for men aged 15-24 was 42.8 percent and for women aged 15-24 was 41.7 percent. The informal employment rate in 2021 was 47 percent of total employment (OECD, 2022).[62] In 2022, the World bank announced that it committed to providing additional financing to provide cash transfers to poor and low-income households while strengthening Tunisia's social protection system under the Amen Social Program.[63]

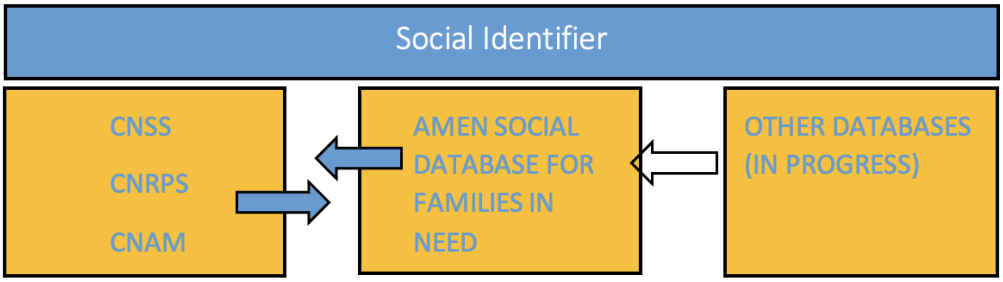
Tunisia's Integrated Social Assistance System

Tunisia is en route to moving to a fully integrated system over the coming years. Currently, the social assistance distribution system can be considered partly integrated. The Ministry of Social Affairs of

[60] Since 2018, the social workers in the field have been provided with tablets.
[61] The NGOs operating in Tunisia are not involved in the provision of officialy social assistance.
[62] Source: https://oecdecoscope.blog/2022/04/04/improving-skills-and-employment-opportunities-in-tunisia/#:~:text=Informalpercent20employmentpercent20accountspercent20forpercent2047,retailpercent2Cpercent20transportpercent20andpercent20hospitalitypercent20services.
[63] Source: https://www.worldbank.org/en/news/press-release/2022/03/29/tunisia-new-us-400-million-financing-to-help-mitigate-the-impact-of-COVID-19

Tunisia developed a new Management Information System (MIS) and introduced a new targeting system under the Amen Social program. The fundamental building blocks of the new MIS are the interoperability platform, digital government-to-person payment platforms, and electronic health cards, which have been essential tools during the COVID-19 Pandemic. The interoperability of this platform enables automatic data to cross-check with social funds databases and the Health Insurance Fund (CNAM, CNRPS, and CNSS) and confirm the eligibility of households for social assistance (UNESCWA, 2019). The system covers about 7 million social security and social assistance registries.[64] At the same time, the database is supported by the information flowing from household labor force surveys and other nationwide surveys conducted by the National Institute of Statistics, as in the case of Indonesia and Türkiye. Currently, the system is integrated with only the health insurance fund through a single social identifier. Still, there are efforts to connect the database with the information system of the Ministry of Education, Ministry of Finance, Ministry of Transportation, and Real Estate registries. Social assistance payments are generally made through the Postal Services of Tunisia, but authorities are also putting effort into making payments fully digital. Making digital payments widespread is expected to increase financial inclusion. ***Figure 17*** summarizes the integrated system in Tunisia.

Figure 17 Pillars of social assistance in Tunisia



Source: Ministry of Social Affairs Authorities and UNESCWA, (2019)

As this report shows, introducing unique identity numbers for citizens is a crucial requirement for building integrated systems. Beneficiary databases and integrated registries are critical for connecting the social insurance, health care, and social assistance components and merging them into a consolidated social protection system (UNESCWA, 2019). In the case of Tunisia, there are multiple beneficiary databases built by several institutions, each of which uses a different sectoral identifier for the end-users. The integrated social assistance system made it possible in Tunisia to connect the social registry identifiers with health insurance identifiers. However, the Tunisian system still does not rely

[64] Source: Ministry of Social Affairs authorities.

on a single number that can be used for all transactions involving different ministries. In particular, key ministries, such as the Ministry of Education and Ministry of Finance, use other identifiers in their database for the same individuals, which poses a challenge for moving into a fully integrated system. Currently, the social assistance system includes verification processes with the Ministry of Education and Real Estate Ministry; however, these verification schemes are not electronically integrated into the social assistance system. It takes about 15 days to get the information from other ministries. It is, however, one of the top priorities of the Tunisian government to move to a fully integrated system by 2024.

Challenges for Building a Fully Integrated System

Although the Tunisian government has achieved significant steps over the last years, especially with the launch of the Amen Social Program, there are still factors that pose challenges to moving into a fully integrated system and increasing the efficiency of social assistance provision.

- The disconnect between the sectoral and the national identifiers in Tunisia partially stems from the fact that the state does not issue individuals under 18 national identity cards. There is a birth registry in the municipalities; however, acquiring a national identity card only becomes mandatory when a citizen is 18.

- The other challenge is a large informal sector in Tunisia. Casual employment is as high as 47 percent overall, while it is much more widespread in rural and agricultural areas. Building the database for formal employees and matching it with other public records is a relatively more manageable task. However, collecting the data for workers of the books remains a significant challenge, although the Tunisian government started issuing social assistance identity numbers for informal workers in 2016. So far, the Tunisian government has successfully integrated the identifiers for the contributory regimes of CNSS, CNRPS, and CNAM with the identifiers for beneficiaries of non-contributory programs. However, since the social assistance provision is mostly an on-demand system, i.e., the households in need have to make an application as opposed to the system detecting the families from the administrative data, there is a risk that the most vulnerable segments of the population in the rural areas might be left out due to information and travel barriers. A recent study by Khaled (2020) reveals that half (48.9 percent) of the poor population and two-fifths (39.4 percent) of the population in extreme poverty do not benefit from any component of the National Program for Needy Families (PNAFN). Khaled estimates that the highest inclusion errors in the PNAFN are in the western regions of Tunisia, particularly in the North West and Centre West.

- Tunisian National Centre for Informatics (CNI) is the responsible public body for storing all public and municipal workers' population registries and payroll data and ensuring interoperability across platforms. CNI has been instrumental in digitalizing the population and payroll databases and matching them with social assistance databases. The CNI authorities explain that another challenge in digitalization and matching has been the inconsistent data entry in both databases. Both databases are in Arabic, and it is not uncommon that the names of the individuals are entered differently in payroll roll and social assistance databases. However, the authorities report that integrating the databases has helped remove the duplications and helped exclude the individuals from the database who have been unrightfully receiving social assistance.

- In the absence of a single data platform with unique individual IDs for potential beneficiaries, the Tunisian authorities currently emphasize increasing interoperability through the collaboration of ministries and CNI, aiming to create matching tables between databases of respective ministries. As such, the integration effort is going on a case-by-case basis, as CNI has successfully implemented interoperability platforms in cooperation with individual ministries. While there is a fair amount of coordination between interested parties, the required organizational structure seems lacking for fuller integration. Most crucially, the lack of unique national IDs and insufficient social registries are pressing challenges.

Overall, Tunisia has a strong track record in social assistance provision and remains one of the countries with the most robust social protection in the Arab World and the MENA region. Despite the challenges, the government of Tunisia has made significant progress in moving to an integrated social assistance system. There is a strong political will and coordination among different public institutions to improve the efficiency of the social assistance system.

Box.6. Tunisia: Lessons Learned

- *Public institutions using different (sectoral) identity numbers for the same individuals can pose significant challenges for ensuring consistency and integrating the databases*
- *Digitalizing registries can be harder and may take longer than expected as the use of multiple alphabets as well as different spelling of same name and surnames might require multiple rounds of verification across different public databases.*
- *Prevalence of informal employment makes targeting through integrated systems harder.*
- *Technical and financial support from international organizations can help countries gradually move to integrated systems in social assistance provision.*

5. GUIDE FOR DEVELOPING AN INTEGRATED INFORMATION SYSTEM FOR SOCIAL PROTECTION

5.1 Universal principles for building an efficient social protection system

Based on the lessons that we draw from the best practices of other countries, we here discuss the fundamental principles of how the existing protection systems can be improved toward integration as follows. The principles, though, should be considered as remarks needed to be guiding mental models rather than a specific solution set. In the Introduction, we argue that the concrete steps toward the integrated system are driven by policy objectives, country context, and existing technical and institutional setup. Therefore, these universal principles are not concrete policy actions; they are principles the policymakers follow at each stage of the system design.

Incremental changes matter
Effective protection systems – from design to delivery- must change over time, and the point of departure dramatically matters. A practical development framework identifies and addresses the challenges and strengths of the existing modalities. Dynamic and incremental improvements are the most effective for improving the current systems. For instance, Türkiye's apparent success in transforming the protection system toward a full of centralized digital information system was built on an initially fairly advanced social registry and information infrastructure. It was subsequently improved in the last two decades.
From simple to complex
Simple adjustments and improvements are crucial to building complex systems. Perfection is an idealization that usually prevents the successful implementation of new ideas and revisions. In almost all countries, social protection is relatively complex, involving many stakeholders and technical and social processes. Therefore, one needs to understand how complex systems change from different perspectives, technological, institutional, and overarching policy objectives.
Implementation is key

Protection systems are as good as their weakest links in any complex organizational system. While many aspects of the protection system may work, one missing component may render it dysfunctional. Improvements need to start from small-scale implementations and be scaled up subsequently. For instance, if the coverage of the existing system is limited due to the low outreach, then that is the weakest component. For example, in Tunisia, the range is extensive due to the highly standardized and digitized system within the Social Affairs Ministry. Still, the creation of effective integration between different programs is dwarfed by the lack of a well-defined social registry.
Client interface
A functioning client interface is helpful in dynamically including the new beneficiaries. Client interface should facilitate the potential beneficiaries to apply for programs, as well as coordinate the different institutions and organizations to track the updated information on clients and delivery systems. Also, it is crucial to get the consent of the individuals who are the essential stakeholders in the systems. The change in the system needs to be valuable and welfare-increasing for the beneficiaries. For instance, the e-state application in Türkiye allows all individuals to track their social supports, apply for them, and get notifications; therefore, the interface has a definitive value from the perspective of the beneficiaries.
Coordination is the foremost challenge.
An effective integrated social assistance system emerged only as far as the existing political and institutional framework permits. Mapping the priorities, interests, and concerns of the current organizational structures at different governance levels is key to developing effective systems. The policymakers need to identify all relevant organizations in the social assistance realm, what kind of data they store, how they use it, why they will be willing to share their data, how they will benefit from an integrated system, whether they have sufficient capacity to update and improve the databases. The active involvement of all stakeholders should be defined and ensured. Good governance precedes exemplary technical implementation.
Dynamic inclusion is another big challenge.

Expanding outreach to new beneficiaries and dynamically updating the information on the existing beneficiaries is one of the most challenging tasks in the protection systems. It requires integrated data systems, functioning governance, and a good software application ideally supported by social registries. Therefore, identifying the *status quo* and challenges for dynamic inclusion is very important.
One-size-fits-all solutions do not work.
Dynamic and complex systems are highly context-dependent. For instance, decentralized governance may require better coordination with local authorities; therefore, lessons from countries with a stable central government may be useless. Similarly, one nation with functioning integrated registries is not similar to the one with only a few disconnected programs, or for that matter, to another country with a working social registry. As such, it is still crucial to identify common patterns and typologies since the countries can learn from the best practices of others with similar characteristics.

5.2 Conceptual framework for change in social protection

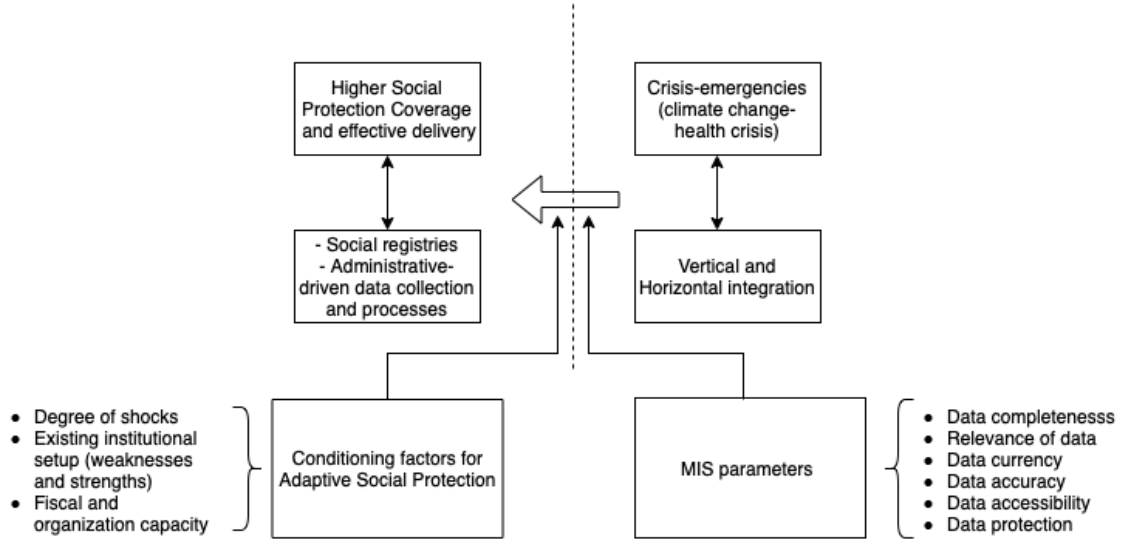
The fundamental principles listed above can be considered concerning the following conceptual framework that focuses on how the existing protection systems can be transformed. The framework, visualized in ***Figure 18***, is mainly designed for the case of emergencies and unexpected shocks such as COVID-19. However, it is also generally relevant for any development of Adaptive Social Protection, the term the World Bank uses to refer to the need for continuous updating and improvement of the existing systems in the face of external shocks and internal challenges.

One of the key lessons we could derive from case studies is that higher social protection coverage and efficient integration implementation are correlated with the existence of social registries that could be combined with an integrated beneficiary system. Added to that is the organizational capacity that allows administer-driven data collection. Therefore, Adaptive Social Protection can, broadly speaking, be defined as the transformation of the existence of loosely connected social programs towards integrated implementation. Crucially, the emergencies/shocks mainly provide incentives to help this transformation. While in standard times, “design tweaks” or “piggybacking” (minor revisions) are more rule than the exception, the unexpected shocks and fast-emerging needs to increase effectiveness and coverage require vertical or horizontal integration of the existing protection systems. In other

words, new potential beneficiaries should be integrated into the current systems, and the existing beneficiaries should be provided additional relief in the case of emergencies.

The degree to which the attempts of vertical or horizontal integration help integration depends significantly on two sets of factors: Conditioning factors, the adoption of organizational and technical innovations, and the use of information systems. Assuming that policymakers already aim for integration, the conditioning factors include the degree of the shocks, existing institutional setup, and organizational capacity. It is therefore understandable that COVID-19, climate change-related incidents, and the increasing economic distress resulting from the conflicts and rising inflationary environment worldwide forced many countries, including many OIC members, to adopt integrated approaches, greater institutionalization, and digitization.

Figure 18 Key dependencies for an integrated information system for social protection



Source: Authors' work.

Secondly, the adoption of information technologies should be understood concerning this institutional framework and processes. At each step of using MIS, the creation and efficient use of data-driven technologies are critically conditioning the integration transformation. Data completeness, relevance, currency, accuracy, accessibility, and data protection are essential parameters of the successful use of digital data systems. As a result, Adaptive Social Protection is an interlinked institutional and technical innovation.

5.3 Suggested workflow

Initial question set

Before starting to produce design ideas and implementation, it is imperative to obtain a comprehensive understanding of the initial setup, existing organizations, and technical know-how. The following questions can give the policymakers solid introductory prior information based on the current resources, ongoing challenges, and opportunities. (***Table 13***) The initial questions can be evaluated based on program-level, institution, and data-infrastructure levels.

Table 13 Survey for initial evaluation

Program-level information base	• Number of existing social protection programs • Their objectives, the targeted and covered populations challenges to expanding coverage • Governance of each program, stakeholders, and the means through which they are interconnected (sharing data/information, hierarchical relations, cross-validation) • Strengths and weaknesses of each program at all stages of delivery systems - from outreach to provision of services and management. • What is the mode of intake for each assistance program? On-demand or administer-driven? • How are the new potential beneficiaries detected and later included in the system? • How are the existing programs responsive to emerging grievances? • Are these services conditional or unconditional? If they are conditional, how are the conditions controlled and validated?
Databases at the program level	• What sort of data/information is collected in each program?

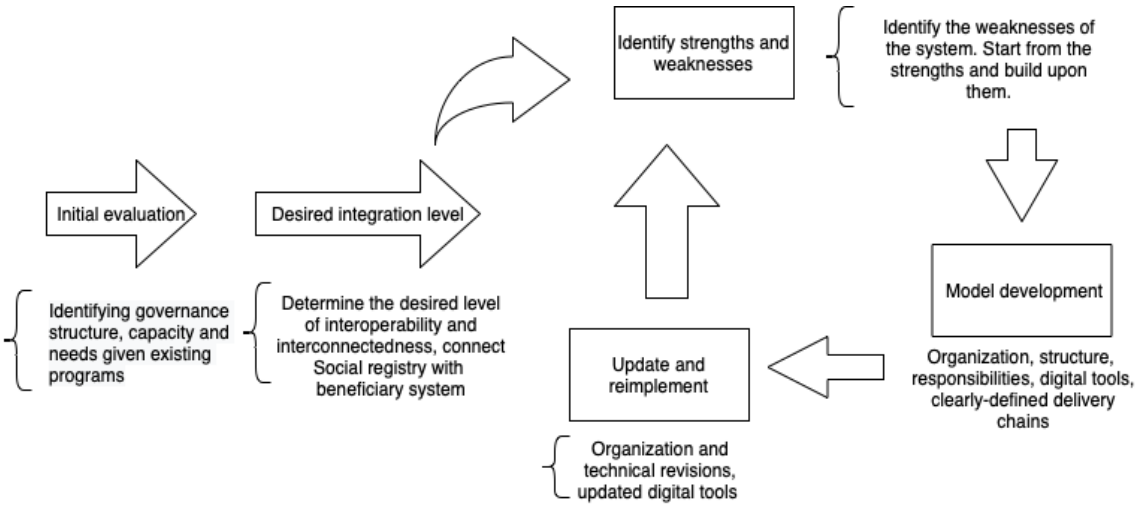
	• How are the data stored (technical infrastructure, digital or manual)? • Who has access to each of them? • How are they validated and verified? • Identify the degree of digitization. • Means of data sharing with other stakeholders? • Is there a way to uniquely identify beneficiaries (via unique codes or numbers)?
General framework	• What is the main policy framework of social protection? Universal or targeted social protection? • What is the share of spending on social protection programs as a percentage of GDP and the government budget? • Is there mid-term and long-term planning for the integration approaches? • Is there a unique organization/institution overseeing the development and implementation of social protection integration? If yes, is this institution provided with a sufficient workforce, technical skills, and institutional authority? • What are the modes of relationship between different levels of governance at the local and national levels, as far as social protection is concerned? Is there a collaborative environment between different levels? • Is there a social registry? If yes, do all potential beneficiaries have a unique ID so they can be identified uniquely? If not, is there a solid plan to create a single data registry with a unique ID for each individual?

	• What are the most vulnerable groups not adequately covered by the existing protection system? • How strong is the legal basis for data privacy? • Which factors most hinder the integration process: political will, lack of institutional coordination, or technical capacity?

Broader workflow

The questions above provide a solid basis to identify how the existing system can be transformed. However, policymakers need to have a clear overarching paradigm regarding the implementation paradigm. ***Figure 19*** aims to provide such a paradigm.

Figure 19 Overall workflow for system development



Source: Authors' work.

- The starting point is to evaluate the existing governance structure, the parties involved, and how they are connected at each step of existing programs. This stage should be informed by the answers to the questions listed above.
- Once the existing setup is understood correctly, policymakers need to determine the desired level of interoperability. For instance, if very loosely connected programs run by different

organizations exist, the first option is to strengthen interconnectedness by developing individual interoperability digital platforms providing access to each institution. By contrast, if there is a relatively high level of integration between existing programs, the next step could be to consider creating a single data platform and social registry. The countries at this stage need to provide additional technical resources to provide a unique ID for each individual. The latter should start from the most advanced existing database.

- Once the policy objective is determined, it is advised to identify the strongest and weakest links in the existing setup. The strategy could target fixing the weakest link, building upon the system's strengths. The main weaknesses could be organizational, technical, human capabilities-related, or financial. For instance, priority should be placed if the main drawback is identified. One option at this stage is to devise a small-scale implementation of the technical problem in the most advanced social program. It is impossible to start from scratch and revise the system altogether, yet, it is more realistic to solve, for instance, the organizational problem in an already-functioning program.
- Building on a solid program and targeting the main weaknesses, the development of the solution models should consider organizational and data-related solutions. For instance, if the data accuracy for particular programs is at stake, getting the involvement of beneficiaries with precise incentive mechanisms can be critical. An efficient digital client interface providing tools to beneficiaries might be helpful in this case. Another example is creating data sharing between different organizations in the case of insufficient data-sharing culture.
- Information systems typically require the creation of collaborative data ecosystems. The model development and initial implementation lead to constant updating and re-implementation with precise planning. That helps to the identification of the strengths and weaknesses of the updated system.

5.4 Suggested concrete pathways for different categories of OIC members

The following models aim to provide possible strategies and information system tools based on three typologies of countries. The suggestions are presented because of the Case Studies on Turkey, Indonesia, Tunisia, and Sudan, provided above and the data on the social protection systems we collected on OIC countries. The main factor behind this categorization is the current interoperability between the existing programs.

Typology 1: Multiple social programs with low-level interoperability

Most developing economies, including many within OIC, have several social assistance programs with a low level of interoperability. For instance, the following scenario is often realistic for those countries: Some cash transfers are carried out by one ministry/local government based on an on-demand system, the application assessment is limited, and the provision relies on manual or electronic payment. In parallel, the health ministry provides some health services for unemployed individuals with its organization and service provision. These two programs' collaboration and data flow are either non-existent, low-level, or not updated. This scenario can be expanded to include a higher level of digitization, such as fast SMS notification of the payment to the beneficiary. A bank carries out the payment as the front-end organization. Alternatively, the payment is automatically sent to the beneficiary's bank account. The increased digitization has recently been driven by the emergencies of COVID-19 in many countries.

For such cases, we advise improving data information systems at the program level and investing in increasing interoperability between various programs.

At the program level:

- Each stage of the delivery chain can further be digitized with suitable data tools.
- A digital client interface can be introduced.
- New outreach strategies can be considered to reach new beneficiaries. Importantly, administer-driven outreach can be viewed as an option.
- Interoperability platforms towards further integration should be given priority with the following points in mind.
- The most relevant improvement can be achieved by increasing interoperability by creating binary interfaces between different programs or creating an integrated digital platform with data flow from multiple programs.
- The delivery chain's assessment, enrolment, and provision stages should be connected. That can be achieved via interoperability or an integrated platform.
- Integrated platform stores, updates, and feeds data to stakeholders as a single **beneficiary registry.** Therefore, stakeholders can easily access “who gets what, when, and how.”
- Payments are integrated into a **payment gateway**. G2P 4.0 payments approach needs to store all payment transactions even though multiple banks are involved.
- A shared **grievances platform** can help increase the system's transparency and reliability.

- A **data analytics platform** should be set up to evaluate the program outcomes of each participant organization. Ideally, an organization with sufficient analytical skills can be set up, and its evaluations should be shared with other stakeholders, considering the concern that data analytics requires specialized technical skills.
- Once these steps are taken, the next step is to explore the ways to make use of connecting the social assistance data with additional institutional databases and ways to increase outreach via civil registries.

Typology 2: Multiple programs with high-level interoperability

Some OIC countries have already progressed in integrating individual programs via a moderate level of interoperability. The main challenge in these countries is to create a fully integrated beneficiary system through social registries, thus increasing the interconnectedness between social assistance programs and other relevant databases. In this scenario: An interoperable platform already exists between several programs, yet, the benefits of integration are not fully exploited. First, not all programs share the same platform, and secondly, the beneficiary databases are not connected with additional essential data sources, which can be used as validation and verification at the stages of assessment and onboarding.

- Depending on the level of interconnectedness, policymakers should consider increasing the scope by introducing all programs into a single registry and connecting social registries with other institutional databases.
- As mentioned above, the objective should be to create a single beneficiary registry, a digital payment platform, a working client interface, a grievances platform, and a data analytics platform.
- A national ID system can be the basis of the social registry: Identifying potential and existing beneficiaries is made possible with unique individual IDs. The starting point to establish such systems is the current birth registers, census-type data, and similar broad databases covering all potential beneficiaries.
- Creating or using the existing social registry is the critical stage for such countries, as that could be the connection medium between many different databases.
- At this stage, it is possible to implement an initial plan in a more restricted pilot study to verify and validate existing registers, which can then be scaled up.

- Income, tax, address, birth registers, and education and health data can be harmonized later to be linked with social assistance databases.
- The fully integrated beneficiary system can be challenging due to the data politics in that stakeholders' participation should be taken to a higher level.

Typology 3: High level of integration, social registry

Few OIC countries have achieved a high level of integrated beneficiary systems and interoperability via digital information technologies. These countries have already operating social registers, enabling the identification of the beneficiaries individually and avoiding duplicates and redundancies. These countries need to improve their system by expanding the ability to redress the systems in line with grievances, introducing dynamic inclusion, and updating their approach by creating an adaptive social system in response to unexpected shocks such as the health crisis, changes in employment conditions, or climate change-related risks. The framework suggested in ***Figure 18*** is particularly relevant for these groups of countries, as their systems are mature enough to become Adaptive Social Protection Systems.

- Dynamic improvement of outreach and intake, not in terms of coverage but temporal adjustments, should be based on intelligent warning systems and better digital monitoring tools.
- The population groups that are not covered enough by the existing programs should be given priority, and specific targeting mechanisms should be developed. One area is the dynamic adjustment of data on those employed in the informal sector and the extension of assistance when the employment conditions change.
- Protection systems can respond to emerging needs pre-emptively rather than *ex-post.*
- The main shortcoming in developing economies with reasonably functioning protection systems is adequacy rather than social protection coverage. While the aggregate level of assistance should be regarded concerning fiscal resources, the dynamic adjustment relying on effective information systems can potentially avoid the misallocation of resources and extend support to those in immediate need.
- Other complex data sources, such as geographical and climate information, socio-economic indicators, the measures of economic distress, can be utilized to predict the needs of the poor and respond accordingly. Intelligent data analytics approaches, big data, and AI can provide key predictive algorithms in this area.

- The technical and institutional enabling environment can be mobilized to explore the possibility of universal protection, which can replace temporary and conditional protection.

6. CONCLUSION

This report aims to guide OIC members in setting up integrated information systems for social protection. Integrated social protection, in general, seeks to increase the efficiency, transparency, and effectiveness of the delivery of social programs. Such systems have posed greater importance in times of shocks and crises, such as global health crises, climate-change-related risks, and economic downturns, which result in the higher vulnerability of the livelihoods of millions of people worldwide. Most developing economies, including those in the sphere of OIC, are increasingly recognizing the crucial role of integrated systems. In developing economies, there is typically a trade-off between social protection coverage and adequacy: the more extensive the coverage, the smaller the adequacy. Therefore, being in command of more limited resources, developing countries must ensure the efficient use of public resources. Indicating the severity of the issue, we strikingly observe that the response of the governments in OIC countries to the COVID-19 crisis was slower than most other economies. The most significant challenges in creating integrated systems are dynamic inclusion of the new beneficiaries, fast and efficient adjustment of the existing social programs, and, thus, overcoming organizational and institutional barriers. Increasing population coverage of social programs is correlated with succeeding with high-level interoperability. Therefore, using MIS in integrated systems and expanding the scope of interoperability is a technical and institutional problem.

The main factors behind the efficient use of information systems are policy objectives, existing social protection programs, and, finally, the country's context. Most countries are moving toward creating integrated systems to improve oversight of multiple schemes and increase the efficiency of eligibility for assistance. However, the policy objectives should be viable and relevant. Viability means that the policy goal should address the country's context and existing social policy setup, which present opportunities and challenges. The country context also indicates how much financial, human capital, and organizational skills resources can be devoted to improving the existing system. Integrated monitoring and information systems allow the flow of information across different institutions and sectors and help governments improve efficiency in decision-making, allocation of scarce resources, and monitoring social policy impact.

The evidence that we collected for this report shows that the trend toward integration and interoperability has been significant among OIC members. Azerbaijan, Türkiye, Uzbekistan, Pakistan, Qatar, and Indonesia have built nearly fully integrated systems. In contrast, Albania, Malaysia, United Arab Emirates, Egypt, Tunisia, Lebanon, Morocco, and Tunisia have made notable progress in achieving high levels of interoperability across national programs. The pandemic speeded up the institutional and technical innovations that had long been in the pipeline to be completed. Social registries have enabled some countries to quickly increase the number of beneficiaries without long

waiting periods, both vertical and horizontal expansion. Also, temporary emergency schemes were made available, mainly targeting the informal workers typically out of the reach of existing social assistance programs.

Based on desk research on the existing systems in OIC countries, we find that OIC members vary significantly in terms of the level of integration. The degree of integration seems to correlate with member countries' economic development levels. In terms of geographical distribution, the member countries of the MENA region seem to have more advanced systems for social services provision. In contrast, African members seem to lag in exhibiting the critical building blocks of integrated monitoring and information systems in social assistance. More specifically, the following points stand out:

- There is an explicit political commitment to moving into integrated systems in most countries.
- Integration of social programs is a policy priority, and most countries have some elements of MIS in member countries. The social assistance provision relies on MIS in at least 22 countries, and the number of member countries with a social registry is at least 21.
- Only several member countries have dynamic inclusion of beneficiaries and a single data platform.
- Active inclusion of beneficiaries exists in Albania, Azerbaijan, Bahrein, Indonesia, the Islamic Republic of Iran, Malaysia, Pakistan, Qatar, Türkiye, and Uzbekistan, and efforts are ongoing in Egypt.
- A single data platform connecting with other public databases exists only in Bahrain, Pakistan, Qatar, Türkiye, and United Arab Emirates. Building a single platform is ongoing in Egypt and Morocco and is planned in Jordan and Somalia.
- Only one member country (the UAE) in which policy actions appeared as early as 2001. Malaysia and Bahrain began implementing such policy actions between 2005 and 2009. Between 2009-2013, Algeria, Indonesia, Lebanon, Pakistan, and Türkiye joined this trend. Yet, the policy actions accelerated over the last decade, most notably during the pandemic.
- As for the apparent challenges faced by the OIC countries, we identify four major areas in which the need for improvement is vital: lack of technical infrastructure, inefficient inclusion and targeting, economic and political uncertainty, and insufficient outreach to minorities and refugees.
- Based on a scoring method, our classification identifies four OIC countries groups. "Very-high-level" integration (Türkiye, Azerbaijan, Bahrain, Uzbekistan, Pakistan, Qatar), "high-level" integration (Albania, Indonesia, Malaysia, United Arab Emirates, Egypt, Lebanon, Morocco, Islamic Republic of Iran, Nigeria, Tunisia), "low" level of integration (Uganda, Kyrgyzstan,

Saudi Arabia, Oman, Bangladesh, Somalia, Jordan), and "very low" level integration (Iraq, Libya, Mali, Sudan, Algeria, Niger).

Our case studies focus on Türkiye, Indonesia, Tunisia, and Sudan and aim to pinpoint the opportunities and challenges in creating integrated systems in different economic, organizational, and technical settings.

- Türkiye stands out as one of the successful cases in which the fast implementation of information systems has been built on well-established social registries, technical know-how, political commitment towards integration, and top-down coordination. Most inter-organizations data sharing challenges have been overcome by the political leadership, which aims to maximize the efficiency of social assistance. The digital databases draw on the digitization of paper-based registers, and the unique ID numbers given to all citizens immensely helped the interoperability.
- Indonesia exemplifies the challenges posed by its large size and population. Inclusion and coordination become key constraints in such environments, so policymakers must create a good governance structure between local and central authorities.
- Having a very low level of integration, Sudan is one of the countries in which limited resources, extreme poverty, and more limited government capacity greatly complicate the challenges. In such an environment, the priority should be placed on the effective delivery of the existing programs, ideally coupled with international support.
- Tunisia is unique because the country's existing know-how, experience, and central organizations have created solid and interconnected social programs. Yet, the lack of social registries prevents us from moving towards an integrated beneficiary system. The current focus is on creating interoperable systems. At the same time, the full benefits of integration will emanate from the efficient use of a social registry, which can help connect different ministerial databases.

The suggested guide that we present at the end of the report relies on case studies and the best practices of other countries. As a guiding principle, policymakers need to recognize that social protection systems are complex ones where incremental changes are usually better than starting from scratch. Identifying the strengths and weaknesses of the existing programs leads to the conclusion that one-size-fits-all solutions are not viable. The implementation begins from small and becomes more complicated. Getting the interests of beneficiaries and organizations involved in social protection is critical. The suitable data interfaces should be supported and, in turn, help different organizations, and the working client interface ensures the consent and participation of beneficiaries. The dynamic data

environments are crucial to overcoming the most critical challenges in creating integrated systems: Better coordination and dynamic inclusion.

Our specific recommendations are based on three typologies of OIC counties. First, some countries have multiple social programs with insufficient interoperability. In such an environment, we advise improving the program level delivery first. Each delivery stage can be digitized, leading to digital databases with client interfaces. The outreach strategies should be expanded, particularly with a shift from on-demand to administer-driven systems. Second, digitized databases can be interconnected by interoperable data platforms through binary data interfaces or more holistic single registries. Provision and delivery (cash or service provision) can be connected to more efficient provision. A single beneficiary system helps identify "who gets what, when, and how." A single payment gateway storing all transactions between organizations and beneficiaries is essential. Furthermore, a single or connected grievances platform helps dynamic inclusion. Digital data analytics helps organizations evaluate their programs. Once these steps are taken, it is natural to explore how to connect the social assistance databases with additional institutional ones.

Second, many OIC countries currently have functional interoperable systems. The main challenge is creating a fully integrated beneficiary system through social registries, thus increasing the interconnectedness between social assistance programs and other relevant databases. Policymakers should consider introducing all programs into a single registry and connecting social registries with other institutional databases. A national ID system can be the basis of the social registry as it allows the identification of potential and existing beneficiaries. The current birth registers, census-type data, and similar broad databases will be helpful. Technical barriers and the intuitional "data politics" at this stage can overcome the political will toward integration.

The final group of countries already have social registries and integrated beneficiary systems. These countries must adjust the integration by designing tools addressing grievances, identifying the under-covered parts of the population, and creating an adaptive social system responding to unexpected shocks and risks. Dynamic improvement of outreach and intake, not in terms of coverage but temporal adjustments, should be based on intelligent warning systems and better digital monitoring tools. Specific targeting mechanisms can be helpful for vulnerable groups (for instance, informal workers, women, and rural groups). Dynamic adjustment relying on effective information systems can potentially avoid the misallocation of resources and extend support to those in immediate need, thus increasing the adequacy of social protection as a whole. Alternative data sources such as geographical and climate information, socio-economic indicators, the measures of economic distress can be utilized to predict the needs of the poor and respond accordingly. Intelligent data analytics approaches and Big Data tools can provide critical predictive algorithms.

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Data Appendix

Appendix Table Degree of integration in social assistance systems across OIC members

Country	Is integration a policy priority?	Since which year?	Admin. structure	Existence of a social registry	On-demand or administrative registration?	Dynamic inclusion?	Inclusion of undercovered during COVID?	Existence of MIS	Single data platform?	Data sharing sectors	Existence of individual data privacy legislation?	Which factors hinder the integration efforts?	How many people are covered?	Score
Albania	Yes	2014	Central ministry through deconcentrated local offices	yes	Admin.-driven	yes	yes	yes	no	health, social insurance, financial	yes	inaccessibility to minority groups		77
Algeria	Yes	2013				no		no	no			economic and political uncertainty		15
Azerbaijan	Yes	2016	Central ministry in partnership with local government	yes	Admin.-driven	yes	yes	partially	no	Social insurance, agricultural, health	yes		105,500 (2016)	95
Bahrain	yes	2007	Central ministry in partnership with local government	yes	on-demand	yes	yes	yes	yes	social insurance, financial, residency, humanitarian	yes			95
Bangladesh	yes	2021	Central ministry in partnership with local government	yes		no	yes	ongoing	no		yes	Lack of technical infrastructure, lack of know-how		40

Country	Is integration a policy priority?	Since which year?	Admin. structure	Existence of a social registry	On-demand or administrative registration?	Dynamic inclusion?	Inclusion of undercovered during COVID?	Existence of MIS	Single data platform?	Data sharing sectors	Existence of individual data privacy legislation?	Which factors hinder the integration efforts?	How many people are covered?	Score
Egypt	yes	2017	Central ministry in partnership with local government	yes	on-demand	ongoing	yes	yes	ongoing	civil registration, utilities, health, humanitarian	yes		31 million	74
Indonesia	yes	2011	Central ministry in partnership with local government	yes	Both	partially	yes	yes	no	Social, and civil registration, some of the municipalities	yes			75
Iran	yes	2014	Central ministry in partnership with local government	yes	On-demand	yes	yes	yes	no	Education, humanitarian, utilities	no			62
Iraq	yes	2021		yes (in progress)	On-demand	no	partially	no	No	Humanitarian, social insurance, civil registration	no			26
Jordan	yes	2016	Central ministry in partnership with local government	yes	on-demand	No	yes	partially	Planned		no	coordination between agency and ministry was insufficient	113,300 (2020)	40
Kyrgyzstan	yes	2022	Central ministry in partnership with local government	yes	both	no	no	partially	no	health, education, financial	yes			50

Country	Is integration a policy priority?	Since which year?	Admin. structure	Existence of a social registry	On-demand or administrative registration?	Dynamic inclusion?	Inclusion of undercovered during COVID?	Existence of MIS	Single data platform?	Data sharing sectors	Existence of individual data privacy legislation?	Which factors hinder the integration efforts?	How many people are covered?	Score
Lebanon	yes	2011	Central ministry in partnership with local government	yes	both	no	yes	yes	no	civil registration, education, health, utilities, humanitarian	yes	large refugee population & corruption-related issues	460,000 (2014)	70
Libya	no		Central ministry in partnership with local government	yes	On-demand	no	yes	no	no	humanitarian, utilities, financial	no	liquidity crisis, lack of technical infrastructure		25
Malaysia	yes	2007	Central ministry in partnership with local government	yes	On-demand	yes	yes	yes	no	social insurance, health, education, financial, residency	yes	targeting issues		75
Mali	no	-		yes		no	no	no	no	humanitarian, utilities, health, education, tax, financial	no	lack of technical infrastructure,		20
Morocco	yes	2020		ongoing	Admin.-driven	no	partially	ongoing	ongoing	Health, agricultural, social insurance, civil registration, humanitarian	yes	Inclusion errors (those without a stable residence)		65
Niger	no			no		no	no	No	no		no	lack of technical infrastructure,		
Nigeria	yes	2016	Subnational government under central oversight	yes	both	no	yes	Yes	no	civil registration, utilities, humanitarian, education, health	yes	targeting errors, lack of technical infrastructure,	8,100,682 (2021)	60

													and know-how		
Country	Is integration a policy priority?	Since which year?	Admin. structure	Existence of a social registry	On-demand or administrative registration?	Dynamic inclusion?	Inclusion of undercovered during COVID?	Existence of MIS	Single data platform?	Data sharing sectors	Existence of individual data privacy legislation?	Which factors hinder the integration efforts?	How many people are covered?	Score
Oman	yes	2020	Central ministry through deconcentrated local offices	no	on-demand	no	yes	yes	no	Civil registry, social insurance, education, health, finance, land, utilities	yes	Lack of technical infrastructure	Approx. 14 percent of the population	46
Pakistan	yes	2012	Central ministry in partnership with local government	yes	both	yes	yes	Yes	yes	utilities, humanitarian, financial	no	targeting errors, economic hardships	5 million beneficiaries (2019)	89
Qatar	yes	2018	Central ministry in partnership with local government	yes	On-demand	yes	yes	yes	yes	social security, residency, employment	yes			88
Saudi Arabia	yes	2018	Central ministry in partnership with local government	yes	on-demand	no	yes	yes	no	social insurance, education	no			50
Somalia	yes	2020	Central ministry in partnership with local government	ongoing	on-demand	no	yes	planned	planned	humanitarian, financial	no	targeting of minority groups, lack of technical infrastructure		41
Sudan	yes		Central ministry in partnership with local government	ongoing	on-demand	no	yes	partially	no		no			20

Tunisia	yes	2016	Central ministry in partnership with local government	yes	on-demand	no	yes	yes	no	Health, Social Security, Social Assistance	yes		50.2 percent of the population (2021)	60

Country	Is integration a policy priority?	Since which year?	Admin. structure	Existence of a social registry	On-demand or administrative registration?	Dynamic inclusion?	Inclusion of undercovered during COVID?	Existence of MIS	Single data platform?	Data sharing sectors	Existence of individual data privacy legislation?	Which factors hinder the integration efforts?	How many people are covered?	Score
Türkiye	yes	2011	Central ministry through the deconcentrated local office	yes	both	yes	yes	yes	yes	All public bodies except some municipalities	yes		57.7 million citizens (2022)	100
Uganda	yes	2021	Central ministry in partnership with local government	yes	both	no	no	yes	no	financial, social insurance, education, health, agricultural	yes		304,000 (2021)	55
United Arab Emirates	yes	2001	Central ministry through deconcentrated local offices	yes	On-demand		yes	yes	yes	civil registration, health, utilities, social insurance	yes		208,623 (2022)	75
Uzbekistan	yes	2021	Central ministry in partnership with local government	yes	both	yes	yes	yes	yes	civil registration, humanitarian, utilities	yes		1-6 million families with children (2022)	90
Yemen	no			no		no		no	no	no		limited access in zones of active conflict		

Source: MIS survey responses by the authorities and desk research