



# GLOBAL REVIEW OF MANAGEMENT INFORMATION SYSTEM PRACTICES: LESSONS FOR CHINA

This research abstract highlights the benefits of establishing an integrated management information system (IMIS) for the social assistance sector in China. It summarises the report by Richard Chirchir and Hongwei Hu, “*Global Review of Management Information System Practices: Lessons for China*”, commissioned by UNICEF China in 2019 and published in 2021.

# RESEARCH ABSTRACT

## 01

### Introduction

China's social assistance system is characterised by: 1) a large number of beneficiaries (around 60 million by the end of 2017); 2) a centralised monitoring system; 3) devolved governance of social assistance programme implementation; 4) variations in implementation across provinces and localities; and 5) a strict screening process, buttressed by systematic enforcement of programme guidelines.

**This report aims to contribute ideas for developing an IMIS for China's social assistance programmes.** The integration of multiple management information systems can bring about significant gains in the efficiency and effectiveness of social assistance programmes.

The report provides overviews of the MISs in minimum livelihood guarantee (or *Dibao*) and the Household Income and Asset Verification System (HIAVS), and then reviews the design and use of IMISs in Brazil, Turkey, Indonesia, South Africa and Uruguay to identify lessons for China from international experiences.

The report is based on a desk review of China's social assistance literature and broader international literature on IMIS and on interviews with key informants, including Ministry of Civil Affairs (MCA), UNICEF and researchers with deep understanding of China's social assistance.

## 02 Landscape of China's Management Information System

Integrating MISs often entails three components: 1) setting up functional MISs for each social assistance programme; 2) linking MISs across multiple social assistance programmes; and 3) linking the social assistance IMIS to other government information systems.

By reviewing the MISs in *Dibao* and the HIAVS, this report suggests the following opportunities and challenges of integration:

- 1) Ensuring interoperability across multiple MISs across the country:** There are a number of *Dibao* MISs across China, so the integrated system needs to put in place interoperability standards, ideally in alignment with China's broader e-government standards. This is to ensure that local *Dibao* MISs can communicate with the central level *Dibao*.
- 2) Standardize indicators:** There are multiple *Dibao* lines and localized implementation mechanisms which raises the need to standardize indicators and variables for national reporting by MCA.
- 3) Upgrading information and communication technology infrastructure for connectivity:** For IMIS to function well, all regions in China should promote connectivity through localized development and application of *Dibao* MISs, optimization and upgrading of hardware and network infrastructure, and linkage to the multiple HIAVSs, to achieve information sharing and nationwide linkages.
- 4) Data privacy and security:** There is need for comprehensive utilization of information security technology, including identity authentication, access control, data encryption, intrusion prevention, virus prevention, security audit and other technical measures to ensure that IMIS runs safely. Besides, social protection applicants and beneficiaries need protections against violation of privacy, unauthorised data sharing and covert surveillance.
- 5) Human capacity at all MIS operational levels:** With introduction of IMIS, training should be strengthened at all operational levels of IMIS, including on system management, operation, maintenance and security, and on policies, laws and regulations.
- 6) Linkage to national ID and residency (*Hukou*):** Linkage to the national ID can help to identify applicants of social assistance and verify their household income. An integrated MIS would allow people to apply for social assistance anywhere, if the rules were changed, and with information exchanged through HIAVS, the means test could still be applied.

## RESEARCH ABSTRACT

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# 02

- 7) **Inclusion of multidimensional poverty:** The IMIS can be designed to strengthen measurement and tracking of multidimensional poverty, by collecting and tracking education, health and living conditions, such as electricity, sanitary toilets, safe drinking water, cooking fuel, assets and housing.
- 8) **Linkage to the Strategy of Targeted Poverty Alleviation:** The underlying rationale for Strategy of Targeted Poverty Alleviation is to coordinate poverty alleviation strategies, accurately measure household poverty status, and ensure effective project arrangements, responsible use of funds, and adequate deployment of personnel at the local level. An IMIS can be designed and developed to leverage the Strategy of Targeted Poverty Alleviation agenda, because it could improve efficiency and coordination of social assistance programmes.
- 9) **Strengthening a unified national system for household income and asset verification:** Some local governments have adopted MCA's recommended HIAVS framework and customised it to their local contexts, and IMIS should build on these lessons to ensure full implementation of a national verification system.
- 10) **Coordination across urban-rural development, regional development and social assistance programmes:** Considering that social assistance is implemented by multiple government departments at the central and local levels, there is need to strengthen both vertical and horizontal coordination to enhance delivery of overall assistance.

## 03

### Experiences and lessons from global IMIS review

From the analysis of case studies of social assistance MISs, including Brazil's Cadastro Único, Turkey's Integrated Social Assistance Service Information System, Indonesia's Unified Beneficiary Registry, Uruguay's Integrated Information System for Social Assistance, and South Africa's Social Pension Integrated Management Information System, the report summarizes that success in integrating MISs depended on the following:

- 1) **Governance** was extremely crucial in designing, implementing and delivering IMIS, with clearly defined roles and responsibilities.
- 2) **A strong political will** to lead successful implementation of IMIS.
- 3) **Coordination** was achieved through a central organisation with requisite mandate to coordinate the design and implementation of IMIS.
- 4) **A functional e-governance system** to accelerate the implementation of an IMIS, linking to broader government registries and information systems.
- 5) **Legislation** to ensure the longer-term sustainability of an IMIS.
- 6) **Integration of IMIS in the social assistance policy** or incorporated as part of the policy review.
- 7) **Addressing multi-dimensional poverty** by strengthening case management using an IMIS and delivering broader social sector services.
- 8) **Undertaking budget and feasibility assessment**, including set up, operational and maintenance costs.
- 9) **Linkage to civil registration and national ID documents** to provide a basis for effective linkages between IMIS and broader registries and information systems.
- 10) **Staff operational capacity building strategies** developed and implemented, setting out different functions between in-house and outsource capacity.
- 11) **Hardware** needs assessed to address upgrades, disaster recovery plans and security.
- 12) **Agile software development** to meet users' requirements and interoperability.

## 04 Conclusion and recommendation

China has the main requirements to establish an IMIS for social assistance, including an appropriate institutional set-up that currently delivers social assistance programmes; strong political will to eradicate poverty underpinned by Strategy of Targeted Poverty Alleviation; a central Ministry responsible for coordinating delivery of social assistance; and established guidelines – *Interim Measures on Social Assistance* – that govern the social assistance system. Moreover, budgets, operational staff capacity, hardware and software are not insurmountable barriers for China.

Potentially, an IMIS could act as a warehouse of information for all social assistance schemes in China, and a gateway linking the applicants to social assistance and broader social services. Given the global experiences reviewed, and based on the rapid assessment of China's context, such an IMIS could consist of three main components:

- 1) **Hukou-based single window** to continue to act as a local administration office for social assistance applications, but also in an IMIS, to allow applications through other channels, including online platforms.
- 2) **Local MIS** to deliver social assistance schemes at local levels, but also to ensure greater interoperability and collection of key essential data for linkages to a national IMIS.
- 3) **Social assistance IMIS** that is linked to all other MISs of social assistance programmes in China, and acts as a gateway to other external databases and broader social services.

An IMIS across the social assistance system would enable MCA to monitor the progress and performance of all social assistance schemes, both individually and together; strengthen the current HIAVS to increase transparency in means testing and promote effectiveness in community-supported targeting processes; inform policy-makers and relevant bodies on progress with social assistance; improve targeting of prioritised households and individuals; monitor multidimensional poverty indicators, such as in education, health and living conditions; support broader social services and improve overall social protection for addressing multidimensional child poverty; enable cross-checks to improve programme efficiency and effectiveness; and support programme monitoring and provide specific reports that allow monitoring of the selected indicators across social assistance programmes.