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POLICY BRIEF

Information and Communications Technology: Here Is How It Can Help the Poor

In Viet Nam, smart cards help people, including the poor, connect to government services. Photo by Edsel Roman.

Proven solutions include digitizing paperwork, integrating databases, using smart cards and digital payments, and transmitting emergency assistance via mobile phones.

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Introduction

Social protection is crucial for reducing poverty and inequality. Social protection programs in Asia are run by various agencies with overlapping lists of beneficiaries. Many of these programs are also still paper-based, prone to data entry errors, leakages, and even fraud.

The demand for faster, more accurate, and efficient service, which originates from within social protection agencies as well as the public, drives the use of information and communications technology for social protection. Information and communications technology introduces automation and improved data management that decreases workloads, and enables managers to make more informed decisions faster and be more responsive to beneficiaries. It also provides convenience and faster service as well as better security for beneficiaries and the public.

In recent years, several developing countries in Asia have shown increasing interest in using information and communications technology for social protection. It has been used as a tool to increase the accessibility of benefits and the convenience of delivery systems. It is also used to improve program oversight and monitoring, facilitate planning across programs, consolidate beneficiary targeting, minimize inclusion and exclusion errors, reduce duplication, and enhance access of beneficiaries to programs and services in other sectors.

There are ongoing initiatives in several countries to integrate data and information management through information and communications technology. Cambodia's Ministry of Planning has established a national registry that uses a standardized targeting system called IDPoor. Government institutions, NGOs, and development partners use this system, which is integral to the government's national social protection strategy. Linking IDPoor with a computerized system will facilitate coordination among Cambodia's social protection programs.

In the area of electronic payments, many developing countries have facilities that allow for electronic fund transfers, the most common of which are online banking and electronic cash. In times of emergencies these services are usually offered for free by mobile network operators. To use them on an ongoing basis requires commercial arrangements. These can be done through public–private partnerships or on a market–led contractual basis where the mobile network operator sends out vouchers from a list provided by the authorities. Hello PAiSA in Nepal is an online payment gateway that uses the internet and interactive voice response services to process transfers. In the relief operations following the 2015 earthquake, numerous international aid agencies worked closely with the Department of Civil Registration to draw up lists of affected persons. They began using short message services to transfer cash and food vouchers to those in need. In a record, Hello PAiSA served 11,000 cases in four hours through four point-of-sale terminals.

Multifunction smart cards also support social protection. In Viet Nam, a card can contain biometric information for identity authentication. It also holds the participant's contribution history in lieu of the social protection notebook. Information from a health insurance card can be included, as can health records and treatment credentials. Some cards also contain the user's identity for banking services and money transfer.

There are many other uses of information and communications technology for social protection, yet uptake for greater development impact is constrained by several factors. These include poor telecommunications infrastructure and limited power supply, especially where beneficiaries are spread over a wide territory such as in Mongolia. Other restraints include inadequate funding, especially for back-end information and communications technology systems, and concerns for cybersecurity and identity theft.

This article was adapted from a working paper, Improving the Delivery of Social Protection through ICT - Case Studies in Mongolia, Nepal, and Viet Nam, published by the Asian Development Bank in 2017.

Policy Options

Information and communications technology, as applied to social protection, falls into five broad categories:

- **Technical or incremental.** Automating or replacing manual routines and paperwork with digital technologies, such as the use of stand-alone computers.
- **Sustained.** Bringing about long-term organizational and administrative improvements in efficiency, accuracy, and targeting, such as the use of databases and analytical software programs.
- **Disruptive.** Fundamental restructuring of the way that programs are organized, often involving an internal shift of ownership of projects, which could, for instance, result in the merging of government agencies. The integration of databases may be part of this process.
- **Radical.** Providing greater stakeholder influence through web-based information systems, and the involvement of nongovernment organizations or community associations.
- **Transformative.** Facilitating a wholesale change in the approach toward social protection, such as web-based systems of self-declaration and assessment. Modern taxation systems often move in this direction.

The adoption of information and communications technology is likely to be part of an organizational process rather than used discretely as stand-alone units. In the early stages, an incremental approach is highly likely, by adding to and extending the reach and scope of existing services. The adoption of computers is a first step, followed by the adoption of database software and digital storage and retrieval facilities. Later, when whole systems are upgraded, the process may be thought of as becoming more cumulative.

A more disruptive use of information and communications technology involves a change of entire systems and substituting new ways for existing practices. This may improve the accuracy and timeliness of payments, and provide beneficiaries with a “one-stop shop” web portal to check their status. These changes are disruptive in the sense that they call for parallel changes in organizational and administrative structures and staffing requirements, which need to be managed with foresight. The disruptive adoption of information and communications technology is a process of substitution, with the adoption of new practices replacing previously established practices.

Changes in the philosophy underlining the delivery of social protection can also be radical. Such changes may place greater emphasis upon the direct participation of beneficiaries and their initiative in managing their claims. Radical changes (i.e., participatory changes) do not have to impact the entire zone of social protection, however. On the contrary, they may be introduced on a trial basis to different parts of the system, for specific services, or spatially distributed by districts. It is likely that radical adoption of information and communications technology will be heavily reliant on a well-developed telecommunications and internet infrastructure, as well as the accessibility and affordability of smart devices.

Policy Recommendations

Policies to invest in information and communications technology for social protection must be budgeted in two ways: (i) absolutely, according to the size of the budget; and (ii) relatively, according to an assessment of future costs and benefits. In the long term, the cost of information and communications technology for social protection will decline[1] so phasing it in allows for extended time frames, and can help avoid costly mistakes.

Where social protection programs are ongoing or under consideration, integrating a component that builds information and communications technology capacity of staff and managers of social protection programs or piloting the use of information and communications technology elements could contribute to improved social protection program implementation and monitoring. Where stand-alone information and communications technology projects are being considered, incorporating a pilot into technology for social services, health, social protection, and education would immediately show how citizens benefit from technologies.

In these potential intervention areas, capacity development will continue to be a recurring need requiring consideration. South–south learning exchanges, continuing research on applications that work and can be shared, and building a network for knowledge sharing involving the private sector (especially technology providers) are among key activities that can support capacity development.

[1] In 1965, Gordon Moore, the co-founder of Intel, observed that the capacity of transistors on an integrated circuit board was growing exponentially, doubling every 18 months, which implied that the costs per circuit were falling by 50% over that same period. This has become known as Moore's Law. With continuous advances in semiconductor or processor technologies, this rate of improvement has continued. Because processors are at the core of all digital electronic devices, Information and communications technology hardware and software have been falling in price and dramatically increasing in capacity since the mid-1950s. One result has been the miniaturization of devices, so today, tablets and smartphone are minicomputers, able to run multiple offline and online applications.

Resources

ISSA Guidelines on Information and Communications Technology.

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