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## **Risks and Benefits of Digital Tools for Social Protection Delivery from a Gender Perspective**

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\* The views expressed in this paper are those of the author and do not necessarily represent those of the United Nations.

## **1. Introduction**

The purported cost-saving and efficiency benefits of automating and digitising social protection systems are hard for governments to ignore at a time of multiple, overlapping climate and financial crises, and shrinking budgets for social protection. Digitised systems can reduce transaction costs, enable real-time analysis, and deliver affordances of scale and efficiency for humanitarian actors and governments. Digital payments also can mitigate some of the risks involved in the delivery of cash and voucher assistance (CVA), such as the dangers involved in transporting money and in conflict settings, and can be popular with recipients due to the privacy they afford (Burton, 2020). The use of predictive analytics for targeting of CVA payments offers the potential for quicker, cheaper, and more efficient enrolment, verification, and delivery of cash at scale (Raftree and Kondakhchyan, 2021).

Yet the drive to digitise must not come at the cost of our fundamental human right to social security. As systems for accessing social protection are increasingly delivered through digital channels the United Nations Special Rapporteur on extreme poverty and human rights warned of the “grave risk of stumbling, zombie-like, into a digital welfare dystopia” (Alston, 2019). This reinforces the call from UN-Women for ‘a human rights-centred approach to underpin the development and implementation of digital and automation technologies in social and welfare services in order to ensure gender equality in their application.’ (Wajcman et al., 2020)

Whilst there has been significant work on the gendered impacts of these systems in Europe (Digital Future Society, 2020b), less attention has been paid to understanding the broader global picture. This paper outlines a framework for understanding the impact of digitisation on women’s right to social protection, referring to a broad range of research from both the mainstream social protection literature and work on cash and voucher assistance in humanitarian contexts. This report shows how intersecting gendered inequalities can increase women’s risk of exclusion and discrimination, and how these inequalities run through the entire architecture of digitised social protection systems, ultimately threatening women’s rights to access social protection.

## **2. Gendered digital inequalities and social protection: Access and affordability**

It has long been acknowledged that unequal access to digital technologies reflects, reproduces, and augments existing social and economic inequalities along intersecting dimensions of (dis)advantage (Hernandez and Roberts, 2018). Economically marginalised communities, especially rural women living in the most remote settings, face multiple barriers to digital access, including network availability, device, and data affordability, and low levels of awareness, literacies, and agency. This is particularly true for women in LMICs who are the most underserved, including those with low literacy or incomes, who live in a rural area or have a disability. Older women are at greater risk of exclusion as they often have lower levels both of digital literacy and access to Internet and mobile phones. These multiple, intersecting inequalities impact both on women’s access to social protection and to their access to information about their entitlements.

In 2023, for the second year in a row, women's digital inclusion slowed across LMICs. There are 900 million women in low- and middle-income countries who are still not using mobile internet, almost two-thirds of whom live in South Asia and Sub-Saharan Africa. Whilst 61 per cent of women in LMICs now use mobile internet and 81 per cent own a mobile phone, they are still less likely than men to own a mobile phone and use key services, such as mobile internet and mobile money (GSMA, 2023).

Whilst direct payments to women via mobile phone can bring benefits in terms of privacy and agency, with a reduction in the risk of having funds appropriated by male family members (Zimmerman et al., 2020), women's lower level of digital skills and confidence can limit the effectiveness of these programmes. This was the case in a study of Save the Children's Emergency Food Security Program using mobile money in Somalia. Although mobile usage was high, this did not translate to women having knowledge knowing how to use mobile money, including how to manage account functions (Radice and Hussein, 2017). Even where programmes are deliberately targeting women, the risks of exclusion are significant. An assessment of women's experience of digital cash transfer programs in India, Pakistan, and Tanzania, showed that women were often unaware of their benefit entitlements, the timing of disbursements, what money was available in their accounts, and how to use the accounts (Zimmerman et al. 2020).

### **Affordability and the vicious cycle of digital poverty**

Whilst relatively lower levels of digital skills and agency compared to men are an impediment for women's engagement with digitised social protection systems, the top barrier to mobile use overall is affordability (GSMA, 2023). This is unsurprising given the economic challenges women continue to face; one in every 10 women is living in extreme poverty (10.3 per cent) and if current trends continue, by 2030, an estimated 8 per cent of the world's female population – 342.4 million women and girls – will still be living on less than \$2.15 a day (UN-Women and United Nations Department of Economic and Social Affairs, Statistics Division, 2023).

When there is an obligation to use digital means either to access social protection (as in the case of the 'digital-by-default' UK payment Universal Credit [Citizens Online, 2019]) or to access information about entitlements, there is a risk of a dual negative impact on household incomes: a phenomenon described as the vicious circle of digital poverty (Faith et al., 2022). This vicious circle means that women are impacted not only by the cost of connection, but also by a lack of digital access to services or information which can result in increased poverty. This can happen either because recipients are unable to access accurate information about their entitlements and therefore miss out on payments, or because they are sanctioned and financially punished for their failure to meet online-only compliance mechanisms for their payments (Wright et al. 2020). These compliance mechanisms also suggest shifts in accountability enabled by digitisation; whilst citizens are required to be 'digitally visible' to governments, beneficiaries are challenged to understand the inner workings of these systems and the decisions that are made about them by automated systems.

As mobile and broadband prices are often pegged to the rate of inflation, rises in the cost of living will result in people rationing or limiting connectivity. In the UK context, between July 2022 to January 2023, three in ten UK households reported difficulties in affording their communications services in the last month (OFCOM, 2023), whilst an estimated million people in the UK disconnected their broadband in the last year because they could not afford it (Citizens Advice, 2023). Those in part-time work or not in work were more likely to experience affordability problems (OFCOM, 2023). In LMICs whilst the cost of data is reducing, the cost of an entry-level handset typically represents 25 per cent of women's monthly income, compared to 15 per cent of men's (GSMA, 2022).

### **3. Digital social protection: New digital infrastructures**

Beyond these basic inequalities in access to technology, digitised systems introduce new power relations. It has been argued that these developments have profoundly altered state-citizen relations in democracies, with a risk of new forms of control and information asymmetries (Dencik and Kaun, 2020). These shifts take place at all levels of the social protection value chain and change power relations and accountability mechanisms accordingly.

Digital welfare ecosystems bring in new actors as they inevitably involve working with private sector companies (Verdin et al., 2023). These actors introduce new issues related to power and transparency which impact our rights as citizens to understand the workings of government and hold decision-makers to account – especially when it comes to the claimed financial benefits of digitised systems. An audit of the World Food Programme's beneficiary information and transfer management platform SCOPE which was established in 2015 reflected that the "framework is not yet present to rigorously account for the costs and benefits accrued from implementing the technology platform" (Office of the Inspector General WFP, 2021, p. 20). An un-published report commissioned by UK Department of Work and Pensions and released through a Freedom of Information request, found that "it is difficult to gather accurate estimates of the costs involved and savings generated due to the digitalisation of services" and that "the number of failed, scaled-back or delayed projects was very high" (Rand Corporation, 2022).

Digitisation also introduces new power relations at a personal level; with implications for the way people are seen and treated by the state. In one example in Tamil Nadu in India, a system using an Aadhaar-linked smartcard for food rations led to SMS messages replacing an entry in a booklet. These ration booklets had previously offered women a degree of power in their negotiations with shopkeepers, who benefited from the new system. The SMS messages were unreliable and older women were uncomfortable with this technology. In many instances women did not have their own phone so the smartcard was linked to a male relative's phone number, thus limiting their potential agency in the system (Carswell and De Neve, 2022).

New technologies have facilitated an exponential shift in the scale of the data collected from recipients of social protection. There has been a rapid acceleration in integrated approaches to data

and information management in social protection, including linkages across programmes and with a broader government data ecosystem. There are exclusionary risks in across these information systems which require careful mitigation measures, such as ensuring that data for social protection registries is collected in ways that ensure women are included – such as through home visits (Barca et al., 2021). There are also new risks associated with data privacy as data on vulnerable recipients is shared between government and humanitarian institutions. Whilst there has been a welcome focus on data privacy and responsible data practices in the humanitarian sector (ICRC, 2017), mainstream social protection has lagged behind. In 2018 an ILO report warned of a lack of focus on these issues: “For the most part, social protection programmes have expanded in low and middle income countries without serious considerations of beneficiaries’ privacy and data protection, even when these should have been a critical concern under those countries’ international human rights obligations or national data protection laws.” (Carmona, 2018).

### Key technologies in digital social protection

This expansion in data collection has facilitated the use of three key data driven technologies. The use of digital ID, biometrics and automated decision making is accelerating at pace in the delivery of social protection, and each raises gender issues. Table 1 below summarises the benefits/risks and gender specific issues associated with each technology.

Table 1. Key technologies in social protection

Technology	Benefits	Risks	Gender specific issues
<b>Digital identity</b>	Reduce enrolment times, travel and waiting time for affected populations. Speed up process of delivery assistance	Systems not built on functional registries will not be accurate.	Can include women who were previously excluded from social protection systems.
<b>Biometrics</b>	Address fraud and corruption.	Use of existing biometric data for unintended purposes. Requires strong regulatory and expensive human resources to function in accordance with human rights.	Some groups of women excluded by virtue of having weaker fingerprints.
<b>Automated decision making</b>	Enables data-driven decision-making to improve targeting of social assistance. Improve readiness for future disasters.	Replaces human deliberation and dialogue w/automated algorithmic decision-making processes which can amplify existing inequalities in data and cannot be scrutinized by affected populations.	Reflects broader societal bias and discrimination.

Technology	Benefits	Risks	Gender specific issues
		Challenges for transparency and accountability in decision making.	

**Digital identity:** Access to identification is the explicit objective of Sustainable Development Goal (SDG) Target 16.9. As part of their Identification for Development programme the World Bank suggests that it can play a crucial role in empowering women: “While the widespread lack of official ID in developing countries is a critical stumbling block to national growth, it affects in particular women, and their children. Missing birth registration certificates and official ID documentation hampers a host of daily activities: entitlement claims; access to governmental services such as social protection” (Dahan and Hanmer, 2015, p. 4). Yet it has been argued that the political weight of the World Bank is manufacturing consensus on these systems at the cost of robust civil society debate (Cioffi et al., 2022). In Uganda, for example, the digital ID system, commonly known as Ndagamu, has become an exclusionary barrier that violates women’s right to health and older persons’ right to social security (Center for Human Rights and Global Justice, Initiative for Social and Economic Rights, and Unwanted Witness, 2021).

**Biometrics:** These technologies can offer benefits to non-literate communities and can be effective in preventing fraud. Yet in the context of social protection an ILO report identifies notable evidence gaps on their effectiveness; “comprehensive independent studies on biometric technology use in social protection programmes are not available; nor are there many accessible studies addressing risks to privacy and data protection” (Carmona, 2018, p. 9). Whilst biometrics, like other digital tools, offer an impression of infallibility, they are notoriously unreliable, with many groups in society including elderly people, Asian women, manual workers, and workers in the care, health, or beauty sectors reportedly having faint fingerprints (Madianou, 2019). In the COVID-19 response up to 39 per cent of social protection payments initiated through a payment system enabled by the Indian Biometric system Aadhaar payment system failed due to mismatch in biometric data (Barca et al., 2021, p. 18). These risks of exclusion show the importance of proper legal and institutional frameworks to support the human rights of beneficiaries including highly trained and qualified staff, which can be expensive and unfeasible— suggesting that these systems should not be introduced in many contexts where these resources are unavailable (Carmona, 2019).

**Automated decision making:** The exclusionary risks in the use of automated systems for the automated profiling of individuals and households have been widely explored in the literature looking at the implementation of these systems in Europe and the US (Dencik and Kaun, 2020; Eubanks, 2018). Algorithms reproduce, accelerate and automate the historical patterns of gender, race and class bias contained in the historical data sets on which the technology is trained (Eubanks, 2018; O’Neil, 2017; Benjamin, 2019; Criado Perez, 2019). A series of studies have shown how the use of big data to train algorithms in automated decision-making systems is already

being applied in the United States and Europe to determine who will get access to housing, welfare payments, job interviews, bail/probation, and a growing list of services from government and agencies. In one instance, young single mothers in the Dutch city of Rotterdam were erroneously summoned for fraud investigations and had their benefits reduced on the basis of a system that was trained on biased data that produced discriminatory results (Sparrentak, 2023). These biases had devastating implications for the lives of these women and reflect the overall systematic bias in the AI industry which acts as a negative feedback loop for the creation of discriminatory AI systems (West et al., 2019). These biases also manifest in the automation of systems which are themselves often based on a narrow normative view of women and families (Digital Future Society, 2020a).

The use of these technologies has implications for the accountability mechanisms which underpin rights-based approaches to social protection; if you are unable to access or understand the algorithmic decision-making process which has led to the withdrawal of a welfare payment then your political power and agency is diminished. Ongoing research on CVA in Nigeria<sup>1</sup> by the author has revealed the political barriers faced by women in accessing social protection. These barriers take the form of the power wielded by male community leaders who act as gatekeepers in access to social protection (Ground Truth Solutions, 2023). This is reflected in the broader political context for women. Beyond these multiple digital barriers women face continued, and worsening, exclusion from political decision making at all levels of society. UN-Women's own data shows how far off we are from gender parity in political life with women are underrepresented at all levels of decision-making worldwide (UN-Women, 2023). This in turn, impacts on their engagement in the systems for accountability which are vital in exercising their right to social protection.

#### **4. Digitisation and the right to social protection**

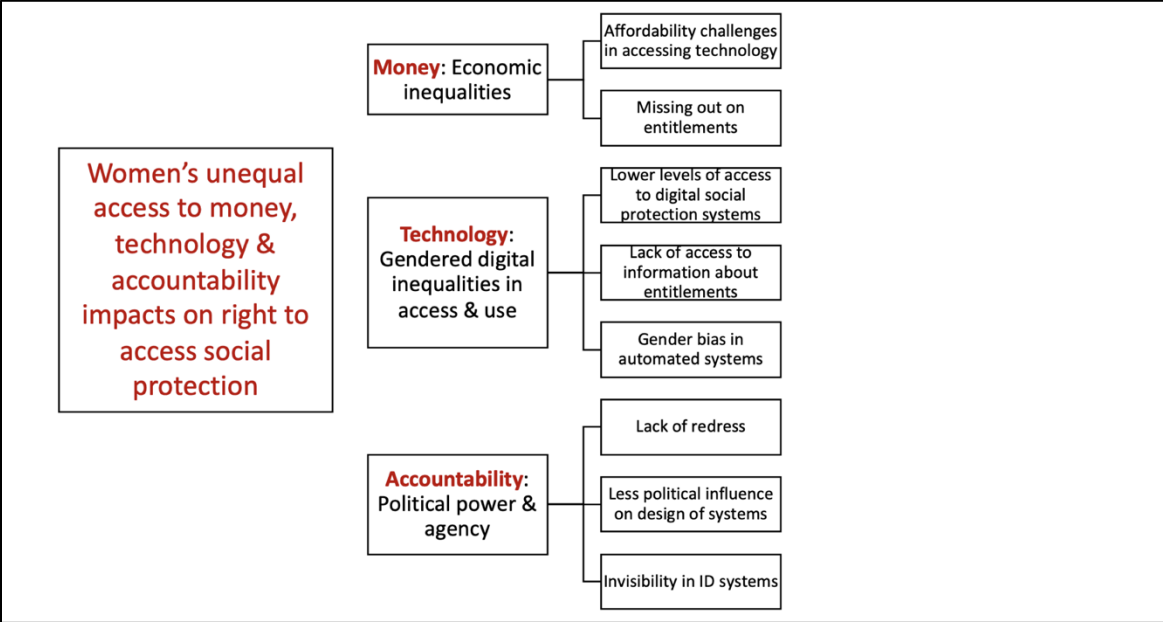
This paper shows how digitisation has led to the creation of a new female subject of social protection with implications for the right to social protection, with an implicit shift from seeing the individual as an applicant rather than a rights-holder (Alston, 2020). This is evident in the Aadhar system in India where entitlement is dependent on registration rather than reflecting a fundamental right to social protection (Masiero, 2020). This presents challenges for a longstanding justice-based view of social protection as part of a “rights-based struggle for the just distribution for resources” (Sabates-Wheeler et al., 2020, p. 10). More broadly, as shown in figure 1 below, this paper shows how intersecting economic, digital and political gender inequalities women face impact on their right access to social security (United Nations Committee on Economic, Social and Cultural Rights, 2008). It is only through mechanisms which address

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<sup>1</sup> Research carried out in NE Nigeria as for the Foreign, Commonwealth and Development Office-funded Better Assistance in Crisis programme.

all three aspects of these inequalities that women can be ensured of the right to access social protection.

Figure 1. Gendered inequalities in digital social protection





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