

# Advancing gender equality and women's digital empowerment in the Global South

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## Key messages

Enabling women's and girls' fair and equal access to the opportunities of digitalisation requires:



Identifying and addressing key obstacles to digital access.



Investing in sustained access to technology for girls to enable a hands-on approach to the development of digital skills.



Developing appropriate data management systems and indicators that better reflect the extent and complexity of the digital divide.



Designing and adopting measures to promote women's participation in all aspects of digital development, namely in technological innovation and digital governance.



Making sociocultural factors central to every solution and challenging limiting gender stereotypes in digital inclusion design.

There is a global shift towards digitalisation that is driving technical, social, and organisational changes (Nordic Co-operation, 2020; Sorama, 2018). As such, having the capacity to leverage digital technology has increasingly been identified as essential to ensuring individual wellbeing and enhancing community and political engagement (West et al., 2019). Several international actors also identify digitalisation as a development enabler and as having the potential to drive equality (United Nations, 2021; International Telecommunication Union [ITU], 2022; United Nations Development Programme [UNDP], 2021; World Wide Web Foundation, 2020; Organisation for Economic Co-operation and Development [OECD], 2018; United Nations Industrial Development Organization [UNIDO], 2019; SIDA, 2015). However, the heightened reliance on information and communication technologies (ICT) resulting from COVID-19 lockdowns has illustrated that many countries are unprepared for this drastic digital shift. During the pandemic, governments faced difficulties ensuring inclusivity in the delivery of digital public services. This is particularly apparent in the Global South, where the rapid digitalisation of public services has deepened structural inequalities and vulnerabilities.

Given the shift towards digitalisation in the face of COVID-19, and the newfound importance of connectivity and digital literacy for accessing public services, the need to bridge the gender digital divide has become ever more pressing. Women and girls were already disadvantaged in social development indicators, and the rapid digital shift has threatened to create new gaps while broadening existing ones (ITU, 2021; UN Women, 2021; GSMA, 2021). In fact, women and girls benefited 25% less than men from digital access initiatives during the pandemic, and 1.7 billion—a third more than men—remained unconnected to the internet (ITU, 2021; UN Women, 2021; GSMA, 2021). Early findings suggest that the lack of equal access to ICT resulted in reduced opportunities for women and girls to continue learning and working during the pandemic, as well as accessing market, financial and health services (ITU, 2022a; Javed et al., 2021).

■ **During the pandemic, governments in the Global South faced difficulties ensuring inclusivity in the delivery of digital public services.**

Based on experiences from the pandemic, this policy brief argues that facilitating women's and girl's access to ICT, addressing sociocultural barriers, and ensuring access is being effectively measured, are key priorities for advancing gender equality and women's digital empowerment in the Global South. Failing to tackle these challenges will lead to the absence of women and girls at all stages of technological use and design, reproducing digital inequalities at the structural level. In partnership with Southern Voice, evidence was collected through a cross-country

research collaboration between the Centre for budget and governance accountability (CBGA), India, the Instituto de Estudios Peruanos (IEP), Peru, and the Science, technology, and innovation policy research organisation (STIPRO), Tanzania. The studies were conducted in 2021, with the participation of 175 digital public service users from Dar es Salaam, Delhi, Iquitos and Lima.

## ■ Facilitating access to ICT

Women are more likely than men to remain unconnected to the internet, and the figures drastically increase in the least developed and developing countries of the Global South (GSMA, 2021; ITU, 2021). Though there has been global progress in the number of women and girls that have access to mobile devices, they tend to rely more on basic or feature phones<sup>1</sup> to access the internet (ITU, 2021; GSMA, 2021). Our findings suggest this limits their possibilities to take advantage of digitalisation because not all services are accessible on these devices. For instance, the Tanzanian online system for business registration only works on computers, yet just 15% of the women interviewed in Dar es Salaam had access to one (Mwighusa et al., 2022). Basic and feature phones also have limited software functionality. This was problematic during the pandemic when specific software was needed for girls to gain access to education. One girl in Delhi, for instance, explained that the reason she dropped out of school was because her phone did not support long calls or video-communication platforms like zoom (Kundu & Shruti, 2022). As Kundu (2020) points out, while the provision of education using mobile phones may have mitigated learning loss for some children during school closures, mobile phones are ill-equipped for some tasks, such as lengthy assignments or research.

Furthermore, our findings illustrated that women and girls have more difficulty affording internet services than men. In Dar es Salaam, women made up two-thirds of the participants who considered the internet unaffordable (Mwighusa et al., 2022), and in Delhi, girls were more likely to identify cost as a barrier to accessing online education (Kundu & Shruti, 2022). Recent statistics indicate that men in India and Tanzania are twice as likely to be able to access the internet as women (GSMA, 2019; Ministry of Statistics and Programme Implementation [MOSPI], 2019). In a country such as Peru, where the internet gender gap is lower (4.5 percentage points), the interplay between gender and other socio-economic indicators, such as employment and household composition, has an impact on women's ability to afford

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<sup>1</sup> GSMA (2021) defines a feature phone as "a mobile handset that allows basic access to internet-based services but on a closed platform that does not support a broad range of applications. The handset supports additional features such as a camera and the ability to play multimedia files such as music and video".

internet services (Instituto Nacional de Estadística e Informática [National Institute of Statistics and Informatics INEI], 2021a). For instance, a female interviewee in Peru emphasised that for those who are unemployed or living on their own, internet services are often unaffordable (Barrantes et al., 2022).

Insufficient or inadequate digital skills have also consistently been identified as a critical barrier for women's and girls' use of digital services (ITU, 2021, GSMA, 2021; UNICEF 2021). These generally refer to the ability to perform digital tasks with different levels of complexity, from managing files and information, to sending emails and developing software (ITU, 2021). Our findings suggest that the persistence of these disparities is closely related to women's and girls' unequal access to ICT. In Delhi and Peru, participants of the studies thought that the increased daily exposure they gained to ICT during the pandemic led to an improvement in their digital skills (Kundu & Shruti, 2022; Barrantes et al., 2022). In Tanzania, where women more strongly considered themselves as lacking digital skills, they still favoured using the online system to register their businesses (Mwighusa et al., 2022). Stakeholders in Peru also observed that after years of organising digital skills training for teachers, they 'suddenly learned' to employ ICT for online education once schools were closed (Southern Voice & Institute of Peruvian Studies, 2022). Moving forward, these examples illustrate that women and girls at the extreme end of digital exclusion could especially benefit from sustained access to technology and a hands-on approach to digital skills development.

## ■ Making sociocultural factors central to every solution

Sociocultural factors impacted the way in which women and girls could access digital public services during the pandemic (Kundu & Shruti, 2022; Barrantes et al., 2022; Mwighusa et al., 2022). The power hierarchies, gender stereotypes and social perceptions about the internet and technology within the household influenced their ability to access the digital tools available. In Delhi and Peru for instance, gender and age surfaced as factors which determined who was given priority to use digital tools within the family. Parents in Delhi tended to prioritise elder boys' connectivity and exerted greater surveillance and control over girls' use of mobile devices and the internet (Southern Voice & Centre for Budget and Governance Accountability, 2022; Kundu & Shruti, 2022). In Iquitos, elder female siblings had less time to use digital devices as they were given more domestic and care tasks (Barrantes et al., 2022). Moreover, interviewees from the three countries perceived the internet as unsafe, inadequate, or not intended for women and girls (Kundu & Shruti, 2022; Barrantes et al., 2022; Mwighusa et al., 2022).

Women and girls also displayed lower confidence in using digital tools. Self-perception plays an important role in perpetuating digital gender gaps, as lower confidence in digital skills prevents women and girls from pursuing more complex tasks. West, Kraut and Chew (2019) speak of a 'self-efficacy gap', which refers to a discrepancy between actual and perceived skills influenced by gender roles and stereotypes associated with technology. In Dar es Salaam, four times more women than men thought they were low skilled in using computers, and only women reported having no understanding of how to use the internet (Mwighusa et al., 2022). Women also mentioned feeling discouraged when contacting support services to ask for help in navigating digital service platforms as they received no guidance (Mwighusa et al., 2022; Southern Voice & Science, Technology, and Innovation Policy Research Organization, 2022). In Delhi, the difficulties experienced with online learning made some girls particularly disillusioned with education, leading them to question their capacities to succeed and question their future at school if online learning continued (Kundu & Shruti, 2022).

## ■ Rethinking what is and isn't being measured

Data gaps were cited as recurrent limitations across the three countries, exhibiting flaws in the existing historical data, current data collection processes and data management tools across governmental institutions. In Delhi, there was no quality data on student engagement with online classes, and historical student records were either

unavailable or inaccessible (Kundu & Shruti, 2022). In Tanzania, a blind spot in data collection was also identified. In 2018, the Tanzanian government launched a system to facilitate the registration of businesses online. However, as this system does not record the details of who is accessing the platform, it is impossible to determine who the system users actually are. As some female business owners hire professionals to handle their registration process, this means the number of registered women-owned businesses does not necessarily reflect whether they are able to use the system (Mwighusa et al., 2022). Testimonies from Peru highlighted the lack of a unified data-management system across governmental institutions as an important reason for the difficulties experienced with allocating emergency support strategies during lockdowns (Barrantes et al., 2022; Southern Voice & Institute of Peruvian Studies, 2022).

Besides the unavailability of quality disaggregated data, it is vital to rethink what is being measured. For example, the most common indicator for measuring internet use in global statistics is "the proportion of individuals who have used the internet from any location in the

■ **The power hierarchies, gender stereotypes and social perceptions about the internet and technology within the household influenced women and girls' ability to access the digital tools available.** ■

last three months" (ITU, 2022b). Focusing on this indicator means that infrequent users, or those who depend on relatives for connectivity, may be misrepresented in global statistics. While they may have the ability to access the internet, considering those who use it once every three months in the same category as those who use it daily for complex tasks, further invisibilises those who need support. UNESCO (2021) denotes a gender gap in "meaningful digital use" which highlights the disparities in the frequency and range of digital opportunities that women and girls seize. As seen above, access to ICT and digital skills are mediated by several factors, and connectivity does not necessarily translate into equally benefiting from digital opportunities. Considering that the gender digital divide grows wider as tasks become more complex (West et al., 2019), developing meaningful indicators that reflect women's agency and capacity to leverage digital tools is necessary (Mariscal et al., 2019).

## ■ Ensuring women's participation at all levels of technological innovation

The need for girls and women to be active participants and developers of technology was strongly emphasised across the three countries (Barrantes et al., 2022; Kundu & Shruti, 2022; Mwighusa et al., 2022). The three key priorities mentioned above, namely facilitating women and girl's access to ICT, making sociocultural factors central to every solution, and tackling data gaps go beyond simply improving their individual capacities. Indeed, failing to tackle these challenges will lead to the absence of women and girls at all stages of technological use and design, reproducing digital inequalities at the structural level. Elsbach and Stigliani (2019) refer to a 'vicious circle' in women's participation in the digital realm. They highlight that gender stereotypes surrounding ICT prevent women from using and designing technology, in turn reinforcing the association of ICT as a masculine domain. In practice, this translates into an overall exclusion of women from the sector (gender inequality at ITC work) and the production of gender-biased technological outputs (Olasode, 2022; West et al., 2019).

Take as an example the algorithms used in artificial intelligence (AI) to support governments' decision-making, including to identify social program beneficiaries or desirable policy outcomes. Algorithms can only reflect the data and assumptions they are programmed with (Tabitha et al., 2022; Letouzé & Stock, 2019; Olasode, 2022; Pomares et al., 2020; De Zan et al., 2022). This means that the resulting outcomes will not be value absent, but respond to the data, rules, norms, languages, parameters, and frameworks employed and established by those who designed them (Southern Voice & Centre for Budget and Governance Accountability, 2022). Against a large absence of quality gender-disaggregated data and the lack of women's participation at all stages of technological use and innovation, employing AI for decision-making can create and

reinforce inequities, stereotypes, discrimination, and rights violations against women at a systemic scale. (Tabitha et al., 2022; Letouzé & Stock 2019; Olasode, 2022; Pomares et al., 2020; De Zan et al., 2022). Without addressing women's and girls' digital exclusion, they cannot meaningfully impact the use, development, and ownership of digital technologies to promote gender equality and women's and girl's digital empowerment.

## ■ Conclusion and recommendations

Digital exclusion continues to impact women disproportionately, involving intersecting factors that require sustained and targeted interventions. Facilitating women's and girls' access to ICT in the Global South goes beyond achieving gender parity in mobile phone use, ownership and network coverage. There is a need to identify and address the persistent obstacles women and girls face in gaining digital access. As women tend to rely on basic and feature phones and experience a higher financial burden in covering the costs of internet services, improving their digital skills requires providing higher quality and more affordable access to digital tools. This could be achieved through investing in public spaces that provide low-cost and high-quality connectivity in target areas where women and girls are most digitally excluded. This would enable a hands-on approach to the development of digital skills.

Sociocultural factors also create multifaceted restrictions for women's and girls' access to ICT. These factors are aggravated by gender stereotypes associated with technology which cause women and girls to have lower confidence in the use of ICT. Making sociocultural factors central to every solution is therefore vital for improving women's and girls' confidence in their digital skills. This includes developing strategies that challenge limiting gender stereotypes in the design of digital inclusion solutions. Providing dedicated guidance to support women navigating technologies and services already in place could be a first step in this direction.

Data gaps, the lack of meaningful indicators that accurately reflect women's agency and capacity to leverage digital tools, and a limited participation of women in all phases of technological innovation create and reproduce gender biases in technology that perpetuate a vicious cycle of exclusion. In order to leverage the power of digitalisation, governments need to build strategies that mitigate the absence, unavailability or inaccessibility of historical quality data disaggregated by gender; help identify blind spots in data collection; and develop data-management systems that can be used across public institutions to create integrated solutions. Big data and AI-supported decision-making must be built with rich datasets that reflect a gender balance in both the user interaction and design of digital tools. Digital solutions can only be as inclusive as



the data and assumptions they are built upon, therefore it is vital to uncover those currently invisibilised in data to understand the critical points at which digital exclusion happens. Women must be content creators and digital developers, and fully participate in the production of digital tools and spaces. Bridging the gender digital divide is not only about improving women and girl's skills and access in the digital realm but becomes a question of meaningfully influencing technological development to break the vicious cycle of exclusion.

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