



USAID
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GENDER DIGITAL DIVIDE

DESK REVIEW REPORT

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Submitted To:

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ACRONYMS

ADS	Automated Directives System
ADVANTAGE	Advancing the Agenda of Gender Equality
CPA	Cyber Psychological Abuse
DDI	Development, Democracy, and Innovation
EIGE	European Institute for Gender Equality
GBV	Gender-based Violence
GENDEV	Gender Equality and Women's Empowerment Hub
GSMA	Global System for Mobile Communication Association
ICRW	International Center for Research on Women
ICT	Information and Communication Technology
IDIQ	Indefinite Delivery, Indefinite Quantity
ITR/T	Innovation, Technology, and Research Hub/Technology Division
ITU	International Telecommunication Union
IVR	Interactive Voice Response
NGO	Non-governmental Organization
PAYG	Pay-As-You-Go
SDG	Sustainable Development Goal
TA	Technical Assistance
USAID	United States Agency for International Development
WEEGE	Women's Economic Empowerment and Gender Equality

KEY TERMS AND DEFINITIONS

Big data: extremely large amounts of data that cannot be stored or processed using traditional database software.

Biometrics: biological or physiological characteristics which can be used for automatic registration. Those characteristics include fingerprints, facial structure, iris or retinal patterns, DNA, voice, and signature.

Cybersecurity: the prevention of damage to, protection of, and restoration of computers, electronic communications systems, electronic communications services, wire communication, and electronic communication, including information contained therein, to ensure its availability, integrity, authentication, confidentiality, and nonrepudiation.¹

Data privacy: the right of an individual or group to maintain control over, and the confidentiality of, information about themselves, especially when that intrusion results from undue or illegal gathering and use of data about that individual or group.²

Digital dividends: broader development benefits from using digital technologies.

Digital economy: the use of digital and Internet infrastructure by individuals, businesses, and government to interact with each other, engage in economic activity, and access both digital and non-digital goods and services.³

Digital finance: digital technology that provides access to financial products such as payment platforms, savings, and credit.

Digital literacy: the ability to “access, manage, understand, integrate, communicate, evaluate, and create information safely and appropriately through digital devices and networked technologies for participation in economic and social life. This may include competencies that are variously referred to as computer literacy, information and communication technology (ICT) literacy, information literacy, and media literacy.”⁴

Gender-based violence (GBV): an umbrella term for any harmful threat or act directed at an individual or group based on actual or perceived biological sex, gender identity or expression, sexual orientation, or lack of adherence to socially constructed norms around masculinity and femininity. It is rooted in structural gender inequalities, patriarchy, and power imbalances. GBV is typically characterized by the use (or threat) of physical, psychological, sexual, economic, legal, political, or social coercion, control, or abuse. GBV impacts individuals across the life course, and it has direct and indirect costs to families, communities, economies, global public health, and development.⁵

Information and communication technology (ICT): a set of technological tools and resources used to communicate, create, disseminate, store, and manage information. These can include

1 USAID Digital Strategy 2020: <https://www.usaid.gov/usaaid-digital-strategy/06-annex-iii>

2 USAID Digital Strategy 2020: <https://www.usaid.gov/usaaid-digital-strategy/06-annex-iii>

3 USAID Digital Strategy 2020: <https://www.usaid.gov/usaaid-digital-strategy/06-annex-iii>

4 USAID Digital Strategy 2020: <https://www.usaid.gov/usaaid-digital-strategy/06-annex-iii>

5 U.S. Government, 2016.

video, radio, television, the Internet, social media platforms, and mobile phones. Distinctions are emerging between “old” and “new” forms of media and technology — that is, between the use of television, radio, and other forms of traditional media that have been employed for decades, and newer forms of media, including social media and mobile phones.⁶

Interactive voice response (IVR): pre-recorded audio messages that allow a direct user response, and that collect metadata like date, time, and duration of call.⁷

Intersectionality: the complex and cumulative way that the effects of different forms of discrimination (such as racism, sexism, and classism) may combine, overlap, and intersect — especially in the experiences of marginalized people or groups.⁸

Mobile Internet: this is the key statistic in measuring the gender digital divide. Mobile phone use includes all mobile phones, not just those that are Internet capable. Many users may have Internet-enabled phones but do not use mobile Internet services, or only use a subset. The gender digital divide has been made synonymous with Internet access; thus, there is a significant distinction between mobile phone ownership and mobile Internet usage. For this document, we present it as a journey: the first step is mobile ownership; then, awareness of mobile Internet; then, adoption of mobile Internet; and finally, frequent usage of mobile Internet.

Mobile ownership, access, and use: women’s ownership, access, and use of ICT are different definitions: ownership necessitates that the mobile phone is registered in the woman’s name. Access and use imply a larger pool, where women can utilize others’ phones or community phones. Even if a mobile phone is registered to a woman, it does not mean that she is the primary user — as is the case when the government ties a mobile phone number to a person’s larger national ID number, and the person wants to get a second mobile. Both mobile phone use and ownership are important statistics as they can, at times, serve as proxies for family and gender dynamics in the household.

Mobile money: use of a mobile phone to transfer funds (between banks or accounts), deposit or withdraw funds, or pay bills.

Technology-facilitated GBV: action that harms others — either based on their sexual or gender identity, or by enforcing harmful gender norms — that is carried out (by one or more people) using the Internet and/or mobile technology. Actions include stalking, bullying, sexual harassment, defamation, hate speech, and exploitation.⁹

Women’s economic empowerment and gender equality (WEEGE) (working definition): women’s economic empowerment exists when women can equitably participate in, contribute to, and benefit from economic opportunities as workers, consumers, entrepreneurs, and investors. This requires access to and control over assets and resources, as well as the capability and agency to manage the terms of their own labor and the benefits accrued. Women’s economic equality exists when all women and girls have the same opportunities as men and boys for education, economic participation, decision-making, and freedom from violence. This requires collectively addressing barriers to commercial activity and labor market participation, such as restrictive laws, policies, and cultural norms; infrastructure and technology challenges; unpaid care work; limits on collective action; and poorly enforced protections. Women’s economic equality is just one facet of gender equality more generally, which requires attention to the full range of gender gaps - economic, political, educational, social and otherwise.

⁶ SDD, undated.

⁷ SDD, undated.

⁸ Merriam Webster Dictionary Online: <https://www.merriam-webster.com/words-at-play/intersectionality-meaning>

⁹ ICRW, 2018.



Photo: borgogniels/Getty Images/Stock

EXECUTIVE SUMMARY

Banyan Global is working closely with the United States Agency for International Development (USAID) Technology Division of the Innovation, Technology, and Research Hub (ITR/T) — which is part of the Bureau for Development, Democracy, and Innovation (hereafter, DDI) — to develop tools related to the gender digital divide. This work was requested by USAID’s Bureau for Development, Democracy, and Innovation, Gender Equality and Women’s Empowerment Hub (DDI/GenDev) and was contracted under the Advancing the Agenda of Gender Equality (ADVANTAGE) indefinite delivery, indefinite quantity (IDIQ) Women’s Economic Empowerment and Equality (WE3) Technical Assistance (TA) task order. It forms part of the [USAID Digital Strategy](#), which charts an agency-wide vision for development and humanitarian assistance in the world’s rapidly evolving digital land-

scape, through the “Closing the Gender Digital Divide” initiative.

This desk review is the first phase of creating gender digital divide tools for USAID Gender Advisors. It provides an overview of the current status of the gender digital divide (with a particular focus on mobile phones and mobile Internet, although these are not the only aspects of the gender digital divide), including an analysis of why it exists, why closing the gender digital divide matters, and the potential risks for women and girls in using technology. It presents some key recommendations on how to mitigate those risks (Table 1).

| KEY FINDINGS AND RECOMMENDATIONS

WHAT IS THE CURRENT STATUS OF THE GENDER DIGITAL DIVIDE?

The digital divide is the distinction between those who have Internet and/or mobile phone access and can make use of digital communications services, and those who are excluded from these services. The gender digital divide reflects the inequalities between men and women in terms of technology access and use.

More than half of the world's women are offline: the global Internet penetration rate for women on all devices is about 48 percent, compared to about 58 percent for men (a gender gap of 17 percent). Three hundred million fewer women than men use mobile Internet (a gender gap of 20 percent).

Around 393 million adult women (aged 18 and over) in low- and middle-income countries do not own mobile phones; women are 8 percent less likely to own a mobile phone than men. This gap is larger in certain regions: in South Asia, the gender gap is 23 percent (207 million women); in sub-Saharan Africa, the gender gap is 13 percent (74 million). Women are 20 percent less likely than men to own a smartphone; again, this gap is larger in certain regions.

There is a growing and persistent gap in women's meaningful use of mobile technology. Women tend to use mobiles (and mobile Internet) differently, and often less frequently, than men: they tend to use a smaller range of mobile services than men, use mobile services (other than voice) less frequently and less intensively than men, and own less expensive and sophisticated handsets.

There is little data on the gender gap for girls under the age of 18, but available data shows similar patterns of access and use as for adult women.

Around **393 million** adult women (aged 18 and over) in low- and middle-income countries do not own mobile phones.



Photo: Paula Bronstein/Getty Images/Images of Empowerment

WHY DOES THE GENDER DIGITAL DIVIDE EXIST?

The key reasons for women's and girls' limited access to, and use of, mobile technology and the Internet are interrelated and complex but are grounded in global gender inequality.

The main barriers can be categorized into four broad areas:

- **Affordability.** Because of social norms, women are often less financially independent than men and have lower levels of income. Since women are thus more price-sensitive than men, they tend to have less sophisticated devices and poorer user experiences. They also have less disposable income to spend on mobile or Internet services.
- **Availability.** Low levels of network quality and coverage create additional barriers for women and girls. Women's choice of network is often restricted by factors such as more basic handsets (or lower-end smartphones), cost of data, and fewer choices of SIM.
- **Ability.** Women's use of mobile and Internet platforms is often limited by their lower levels of technical and digital literacy skills, as well as by their lack of confidence in using technology and the lack of relevant content for women's needs, especially in local languages. There is strong evidence that mobile and Internet access and use follows broader social patterns of deep social exclusion of women and girls; women are disadvantaged in their access and use of technology because of underlying social conditions, including lower levels of education.
- **Appetite.** Safety, security, and harassment is increasingly a major concern for women more than for men, and it acts as a serious deterrent to women's and girls' technology use. This includes a fear of harassment from strangers (such as unsolicited calls, unsolicited SMS, unsolicited online messages, or cyberbullying and harassment), as well as concerns about online data security and privacy. Women also tend to report a lower level of understanding of the potential of the Internet, and a perceived lack of value.¹⁰

[Technology] acts as a vital gateway for women to access information that can improve their livelihoods and significantly enhances their ability to contribute to their families and the global community.

WHY DOES CLOSING THE GENDER DIGITAL DIVIDE MATTER?

Technology enables access to critical health services and opportunities for education, civic participation, employment, entrepreneurship, and access to financing that were once out of reach for many people. It acts as a vital gateway for women to access information that can improve their livelihoods and significantly enhances their ability to contribute to their families and the global community. Indeed, technology offers opportunities for women and girls to overcome hurdles they may face in the physical world, enabling them to reach their full economic potential and to create more self-reliant communities. Access to, and use of, mobiles and the Internet also has an impact on women's empowerment, in addition to social cohesion and subverting gender norms. Yet, just as digital technology is accelerating opportunities and impact around the world, women are being left behind.

¹⁰ The term "appetite" comes from Huawei 2015 and refers to the "awareness, desire, and fear" around use of mobile technology and the Internet.

WHAT ARE THE POTENTIAL NEGATIVE CONSEQUENCES OR RISKS OF TECHNOLOGY FOR WOMEN AND GIRLS?

While technology has many positive benefits for women and girls, there is emerging evidence that digital technology can be a double-edged sword. There are often unintended consequences of digital technology that can threaten a woman's safety and wellbeing. These include:

- **Technology-facilitated GBV.** This is overwhelmingly skewed towards women and girls, and it can include risks in the physical world, such as theft of a device or even physical violence. Observers report that technology is often blamed for increased tensions, conflict, and physical violence against women from their partners and families. There are also risks in the digital world: harassment, abuse, and threats through the Internet or social media are much more common for women and girls than for men, as is revenge pornography and cyberbullying.
- **Cybersecurity and data privacy.** While cyberattacks, data risks, and privacy breaches (such as sharing of personally identifiable or sensitive information) impact both genders, women and girls tend to be more vulnerable. This is because they tend to have lower levels of digital literacy and are less aware of risks and risk mitigation strategies. In addition, both "personal privacy" and "data privacy" have been invoked as reasons to control women and girls and limit their ability to make meaningful choices and act upon those choices.
- **Reinforcement of gender stereotypes and inequalities.** In patriarchal societies, a woman's mobile phone or Internet access and use may be associated with assumptions about her freedom to make her own choices or to form relationships, potentially upending traditional household control and power dynamics. While offering women increased ability to make meaningful choices and act upon those choices, and greater control over their lives, these changes can highlight tensions within a household or community, possibly resulting in reinforced gender-based restrictions or male dominance.

WHY DO THESE RISKS MATTER, AND HOW CAN THEY BE MITIGATED?

These negative impacts of technology can affect the way women and girls use mobile phones and the Internet, limiting the positive benefits that technology can offer. Women and girls increasingly report that the risks associated with mobile and the Internet represent a major barrier: the risks not only limit their access, but they also restrict women's and girls' usage of mobile phones and the Internet. Table 1 presents potential risk mitigation strategies for incorporation into USAID programming.

WHAT ARE THE CURRENT GAPS IN THE EVIDENCE BASE?

The evidence base relating to the gender digital divide, and access and use of the Internet, has grown significantly in the past few years, but there are still a few key data gaps. These include:

- global data, standardized measurement metrics and methods, and indicators that look beyond access to meaningful use
- sex-disaggregated data on digital skills
- data on usage by girls under the age of 18
- data on risks, particularly technology-facilitated GBV, and evidence of successful mitigation strategies

TABLE I. POTENTIAL RISK MITIGATION STRATEGIES THAT USAID CAN CONSIDER

USAID MISSION / GENDER ADVISORS	USAID/DDI/ITR/T
<p>Understand the context and potential risks related to technology, by conducting a gender analysis at the strategy, project, and activity level. Uncover core issues and fears about women's technology use in the community. The analysis should integrate WEEGE, based on Automated Directives System (ADS) 205, and should include specific questions about the gender digital divide.</p>	<p>Address the gaps in research and data by:</p> <ul style="list-style-type: none"> • funding ongoing and additional research into the prevalence and impact of these risks in different regional and country contexts • funding additional research on risks to specific segments of women and girls
<p>Support education and training of women and girls on digital literacy, including:</p> <ul style="list-style-type: none"> • partnering with the private sector • incorporating risks and mitigation strategies into any digital literacy training • supporting digital literacy and risk training for women's and girls' families and wider networks • using or adapting existing digital literacy training materials and toolkits 	<p>Strengthen standardization of metrics and measurement by:</p> <ul style="list-style-type: none"> • working with other organizations and coalitions to coordinate data at a global level and to build an international repository of data on technology-facilitated GBV • working with other organizations and coalitions to help create and roll out a set of standardized definitions and indicators for risks, as well as measurement and data collection tools • working with other organizations to integrate technology-facilitated GBV into GBV studies more broadly
<p>Invest in, support, and share insights on digital products and services that mitigate risks, including those that:</p> <ul style="list-style-type: none"> • provide reporting and recourse mechanisms • protect women's and girls' personal privacy from outside monitoring • are responsible and transparent with data privacy and security • are designed with and for women and girls, with attention to their digital realities • train law enforcement and the community 	<p>Strengthen the gender and ICT ecosystem by:</p> <ul style="list-style-type: none"> • continuing to work with other organizations and coalitions to close the gender digital divide, by empowering women and girls as users, creators, and employees in areas of technology • supporting and funding interventions that specifically address and prevent technology-facilitated GBV or other risks • documenting and sharing insights about what approaches work or do not work, for funded interventions • working with the Digital Sexuality Ecosystem, a global community of practice using digital platforms to educate young people about sex (and consent) as well as risks such as technology-facilitated GBV and online predators • working with players such as Porn Hub, who have released sex education content on their Sexual Wellness Center that is sex-positive, focusing on issues that affect young women such as consent and revenge pornography • continuing USAID's active role in framing Principles of Digital Development; taking the lead on ensuring that Principle 8 (Address Privacy and Security) has a gender lens • ensuring that any work that USAID does on strengthening cybersecurity (as part of USAID's Digital Strategy) has a gender lens
<p>Support initiatives that engage and involve (both male and female) gatekeepers.</p> <p>Work directly with community leaders to create compelling cases for women's technology use.</p>	<p>Strategies will vary case-by-case</p>

USAID MISSION / GENDER ADVISORS

Raise awareness of technology-facilitated GBV and other risks and educate (both male and female) users on their privacy and security rights.

Collaborate and work with other national stakeholders, including:

- national governments, judicial systems, and policy makers — to apply a gender lens to legal frameworks for online safeguarding, privacy, and security
- national governments — to set up protection systems for women and girls
- national governments — to strengthen law enforcement capacity
- other organizations in-country — to share resources and increase reach
- multi-stakeholder groups (such as government, academics, non-governmental organizations (NGOs), the private sector, and women's organizations) — to help strengthen responses at the national or system level
- national women's organizations to ensure that they have a say and that women's voices are heard
- gender and development organizations that have had decades of experience conducting social norms work

Ensure that programs are designed to consider the safeguarding of women and girls, so that they can responsibly access and use ICTs.

Strengthen internal and partner capacity for risk mitigation and safeguarding, by:

- developing or adapting internal digital safeguarding policies, processes, and practices that focus on women and girls, and applying these to any activity that has digital components
- incorporating a digital lens in all existing GBV strategies, policies, and projects
- training staff and partners on risks and mitigation strategies and policies
- leveraging and adapting existing training materials on risks and risk mitigation
- getting buy-in from Mission Directors for leadership and sustainability
- identifying internal as well as partner champions who can mentor others and take the lead

USAID/DDI/ITR/T

Strategies will vary case-by-case

Strategies will vary case-by-case

Strategies will vary case-by-case



The negative impacts of technology can affect the way women and girls use mobile phones and the Internet, limiting the positive benefits that technology can offer.



Photo: trilaks/Getty Images/Stock

BACKGROUND AND PURPOSE

Recently, USAID, and the development community more broadly, has paid increased attention to women's economic empowerment and gender equality. Compelling evidence makes it clear that the economic playing field for women and men is not equal. The benefits of women's economic empowerment and gender equality have been demonstrated repeatedly. However, promoting WEEGE calls for a specific skill set, beyond a general understanding of gender constraints and women's empowerment.

USAID's Gender Equality and Women's Empowerment Hub, within the Bureau for Development, Democracy, and Innovation, contracted Banyan Global through the ADVANTAGE IDIQ WE3 TA task order to promote

WEEGE in all USAID programming by improving WEEGE-related USAID staff capacity, creating WEEGE tools and resources, and enabling DDI/GenDev to respond to mission and operating units' requests for WEEGE support. In addition, the WE3 TA addresses capacity gaps among USAID's development partners, including other U.S. Government agencies, counterpart government agencies, private sector associations, and civil society organizations. Moreover, accelerating women's economic empowerment around the world is integral to supporting our partner countries' on their Journey to Self-Reliance, a strategy designed to enable developing countries to achieve economic self-reliance and transition from being recipients of foreign aid to becoming U.S. trading partners.

DDI/GenDev has requested Banyan Global, working closely with USAID's DDI/ITR/T, to develop tools related to the gender digital divide. This effort forms part of the [USAID Digital Strategy](#), through the "Closing the Gender Digital Divide" initiative. The objective of that initiative is to:

- Scale understanding of the gender digital divide across the agency
- Provide tools for USAID staff to support host countries in overcoming the barriers to women's access and use of digital technology
- Provide further evidence of the benefits and risks relating to women's access to and use of ICT

As part of this initiative, USAID seeks to create two tools: one tool will help USAID staff and its partners to include the gender digital divide in their gender analyses with a WEEGE lens; and a second tool will provide concrete recommendations on how to mitigate the potential negative implications of women's engagement with technology. These tools will build off, and refer to, the WEEGE Technical Guide developed by Banyan Global, paying attention as well to the Integrating WEEGE into a Gender Analysis Toolbox and WEEGE Illustrative Indicators.

This desk review, as the first phase of the process of creating those tools, provides an overview of the current status of the gender digital divide. The research broadly identifies barriers and opportunities associated with the gender digital divide, and specifically focuses on usage of mobile and non-mobile Internet (low- and high-speed) at the individual and household levels (although we acknowledge these are not the only aspect of the gender digital divide). USAID also seeks to gain a better understanding of the risks associated with closing the gender digital divide, including any potential negative or harmful ramifications to women through engaging with ICT, as well as strategies to mitigate those risks.

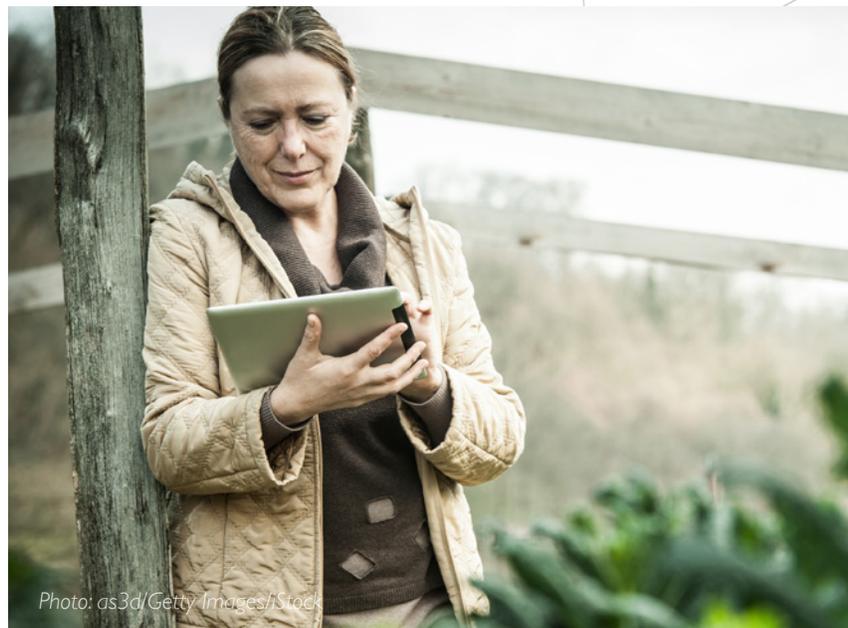




Photo: Jack Gordon/USAID/Digital Development Communications

DESIGN, METHODS, AND LIMITATIONS

The desk review consisted of an in-depth examination of literature related to the gender digital divide. It placed most emphasis on sources that contained reliable primary datasets on women's access and use of technology, whether from the private sector, the development sector, or the academic sector, as well as reports from coalitions of organizations like the [EQUALS Global Partnership for Gender Equality in the Digital Age](#). Priority was given to literature from organizations with an established reputation in this field.

The desk review also looked at case studies of mobile products and programs that had both positive and negative outcomes for women and girls, as well as specific examples of how the risks have been mitigated through other strategies, projects, and activities. The key findings of the review have, where possible, been mapped to USAID's [ADS 205](#) domains and USAID [sectors](#). Key recommendations for mitigating the risks have been mapped to the WEEGE Principles.

RESEARCH QUESTIONS

The purpose of the desk review was to try to answer the following questions:

- What is the current state of the gender digital divide?
- What are the barriers to women using mobile phones, and mobile and non-mobile Internet (low- and high-speed), at the individual and household level?
- What are the opportunities for women using mobile phones and mobile and non-mobile Internet (low- and high-speed), at the individual and household level?
- What are the potentially negative ramifications of bringing more women online? How does it impact issues such as gender-based violence? Related questions to be explored may include:
 - What current research or programs are currently being explored or implemented in this field?
 - Is additional follow-on research necessary? What are the other relevant subjects or topics that should be explored with additional research?
 - How can USAID programs mitigate the potentially negative impacts of increasing women's use of online tools?
- What are the existing methods of assessing and tracking women using mobile phones and mobile and non-mobile Internet (low- and high-speed), at the individual or household level?
- What are the data gaps related to women using mobile phones and mobile and non-mobile Internet (low- and high-speed), at the individual and household level?

Most datasets focus on low- and middle-income contexts and are populated by demand-side surveys.

LIMITATIONS

The evidence base for the gender digital divide is still relatively weak, and there are only a few credible datasets that use their own primary data. There has been an increase in the number of studies and reports in this field in recent years and the same statistics from those few key datasets are generally recycled and repeated in other publications. Therefore, the desk review mostly references those original datasets, rather than other studies which cite them, especially when referring to quantitative statistics on women's and girls' access to and use of technology.

These datasets (which are mostly demand-side surveys) have mostly focused on low- and middle-income contexts in South and Southeast Asia, sub-Saharan Africa, the Middle East, and Latin America. Therefore, the vast majority of the data points on the gender digital divide, as well as most examples and case studies, are related to these contexts — especially the data points that go beyond access (for example, regarding use or barriers to participation).



Photo: Paula Bronstein/Getty Images/Images of Empowerment

OVERVIEW: WHAT IS THE CURRENT STATE OF THE GENDER DIGITAL DIVIDE?

WHY DOES ACCESS TO TECHNOLOGY MATTER?

Over the past decade or so, there has been a growing bank of evidence showing that access and use of ICTs, particularly mobile phones and the Internet, can bring positive socioeconomic benefits at both the macro and the individual level.

At a macro level, increased use of digital technology could add \$2 trillion to the total global economic output by 2020,¹¹ and access to mobile technology and the Internet can help boost GDP through job creation and greater productivity. For emerging markets, this is even more pronounced: for mobile penetration, developing countries can realize 1.2 percent higher GDP for every 10 percent increase;¹² higher Internet penetration in developing countries shows an even larger increase in GDP per capita.¹³

The household or individual level also shows a link between technology use and economic benefits. Research studies in 12 African countries and five Asian countries¹⁴ have found a positive relationship for both mobile phone ownership and Internet use with income, suggesting that having a mobile phone, or using the Internet, can result in an increase in income.

A World Bank report gave examples from rural Niger, where agricultural price information obtained through mobile phones reduced a farmer's search costs by 50 percent, and from rural Peru, where access to mobile phones boosted household real consumption by 11 percent between 2004 and 2009, reducing extreme poverty by 5.4 percent.¹⁵

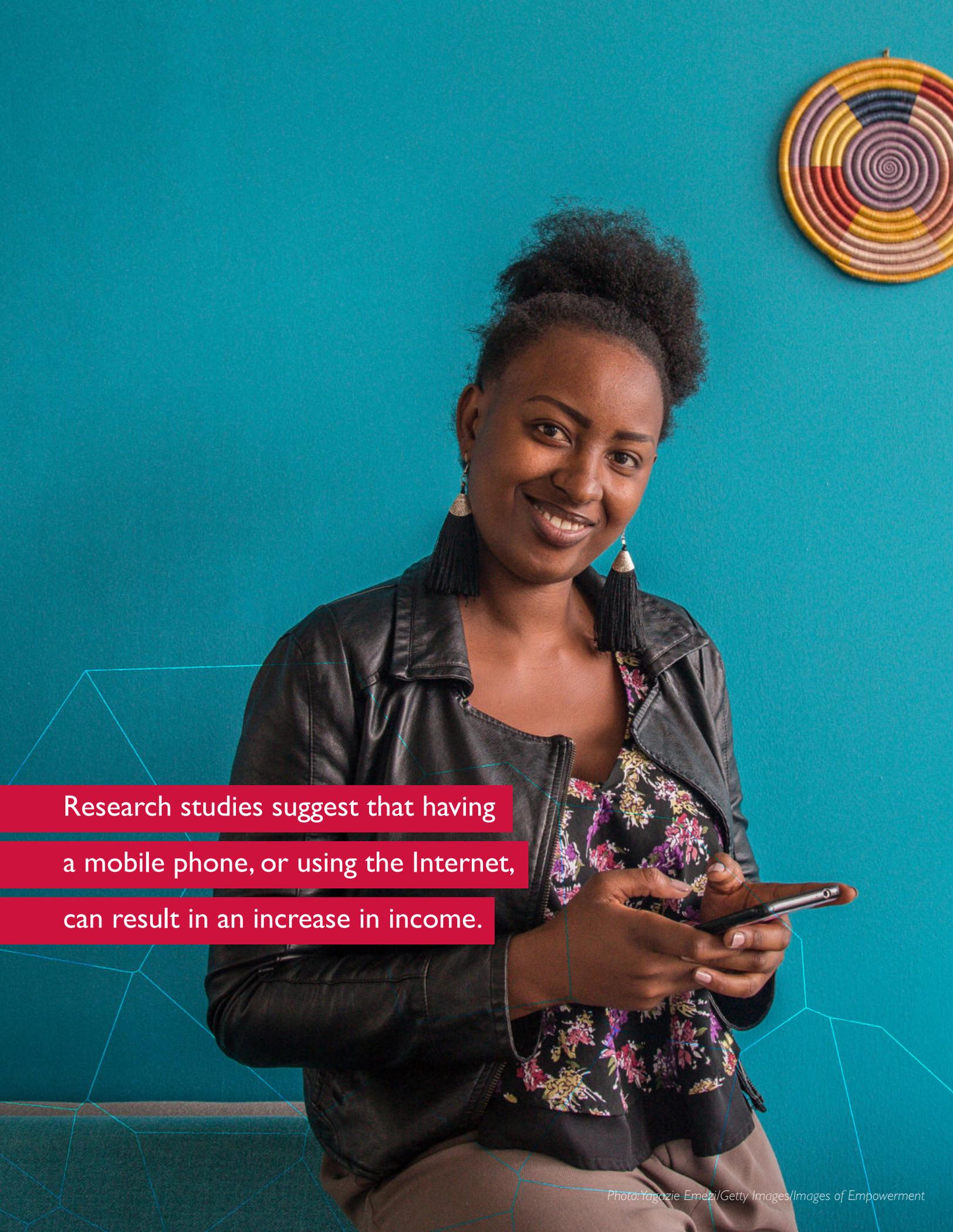
11 Accenture Strategy and Oxford Economics, 2014.

12 GSMA and Deloitte, 2014.

13 World Bank, 2009; Heeks, 2009.

14 Research ICT Africa, 2012; LIRNEAsia, 2012.

15 World Bank, 2016.



Research studies suggest that having a mobile phone, or using the Internet, can result in an increase in income.

There is also evidence that access to, and use of, technology, particularly mobile phones and the Internet, also provide a range of socioeconomic benefits and can act as a large-scale channel for delivering life-enhancing value-added services. These benefits include financial inclusion; employment opportunities; improved access to healthcare, education, and agricultural services; improved productivity; increased safety and security, and increased access to information.

Clearly, for low- and middle- income populations, access to technology and inclusion in the digital economy provide great benefits and offer great potential. At the same time, digital transformation comes with the risk of increasing inequality. Despite the global prevalence of mobile phones and the Internet, the reality in many communities does not yet reflect the potential of a digital ecosystem that drives sustainable and equitable growth and vulnerable or marginalized groups are often excluded.

The [USAID Digital Strategy](#) aims to strengthen open, inclusive, and secure digital ecosystems in each country where USAID works. Through the Digital Strategy, the Agency is further demonstrating its commitment to closing the gender digital divide, by building awareness and capacity of the USAID staff, partners, and partner countries to overcome the barriers to women's access and meaningful use of digital technology. No country will be self-reliant if members of its citizenry cannot benefit equally from the gains of a global digital ecosystem.

USAID recognizes that the gender digital divide significantly hampers the ability of digital technology to help women improve their lives, the stability of their families, and the resilience of their communities. Through the USAID Digital Strategy, the Agency is further demonstrating its commitment to women's empowerment and closing the gender digital divide by sharing best practices learned in previous gender and ICT programs, including the [WomenConnect Challenge](#), and ensuring that USAID digital development addresses digital inequalities and mitigates potential risks or harms for women and girls coming online.

WHAT IS THE SCALE OF THE CURRENT GENDER DIGITAL DIVIDE?

The digital divide is the distinction between those who have Internet and/or mobile phone access and can make use of digital communications services, and those who are excluded from these services. There is a stark gender gap in technology access and use in low- and middle-income countries, with rural low-income women being disproportionately affected;¹⁶ the gender digital divide reflects the inequalities between men and women in terms of technology access and use.

This desk review focuses on access and use of both mobile technology, which is increasingly the first point of entry in emerging markets, and the Internet.

\$2 TRILLION
could be added to the
total global economic
output by increasing use
of digital technology.

¹⁶ GSMA Connected Women, 2020; Web Foundation, 2015.



BOX I. MOBILE ACCESS AND USE VS. MOBILE INTERNET ACCESS AND USE

The first step in the mobile Internet user journey is mobile access and use. Indeed, over 80 percent of Internet connections in developing countries are through mobile. When examining the gender digital divide, we find that mobile access and mobile Internet use are part of a four-step process: the first step is mobile ownership; then, awareness of mobile Internet; then, adoption of mobile Internet; and finally, frequent usage of mobile Internet. (Figure 1)

Many of the barriers that women and girls face for mobile phone access and use are the same as for mobile Internet access and use. Mobile phone access and use is also a prerequisite to mobile Internet adoption and use. Thus, the studies of access and use cited throughout this document look at both mobile phones and mobile Internet (as well as non-mobile Internet use, despite much lower numbers). Closing the Internet gender divide depends on closing the mobile phone access gender divide.

FIGURE I. THE MOBILE INTERNET USER JOURNEY



GSMA *Connected Women*, 2020

ACCESS AND OWNERSHIP OF MOBILE PHONES

» *ADS 205 Domain: Access and Control*

Globally, 393 million adult women (aged 18 and over) in low- and middle-income countries do not own mobile phones. The Global System for Mobile Communication Association (GSMA) states that, globally, women on average are 8 percent less likely to own a mobile phone than men, which translates into 165 million fewer women than men owning mobile phones.¹⁷ This 8-percent gender gap in ownership is consistent with data from the International Telecommunication Union (ITU), Research ICT Africa, LIRNEAsia, and the Global Findex database.¹⁸

Figure 2 shows current levels of women's mobile phone ownership and the related gender gap, by region.¹⁹ The gender gap in mobile ownership varies by region. It is highest in South Asia, where 35 percent of the female population do not own a mobile (207 million women), with a gender gap of 23 percent. This is followed by sub-Saharan Africa, with a gender gap of 13 percent (74 million women).

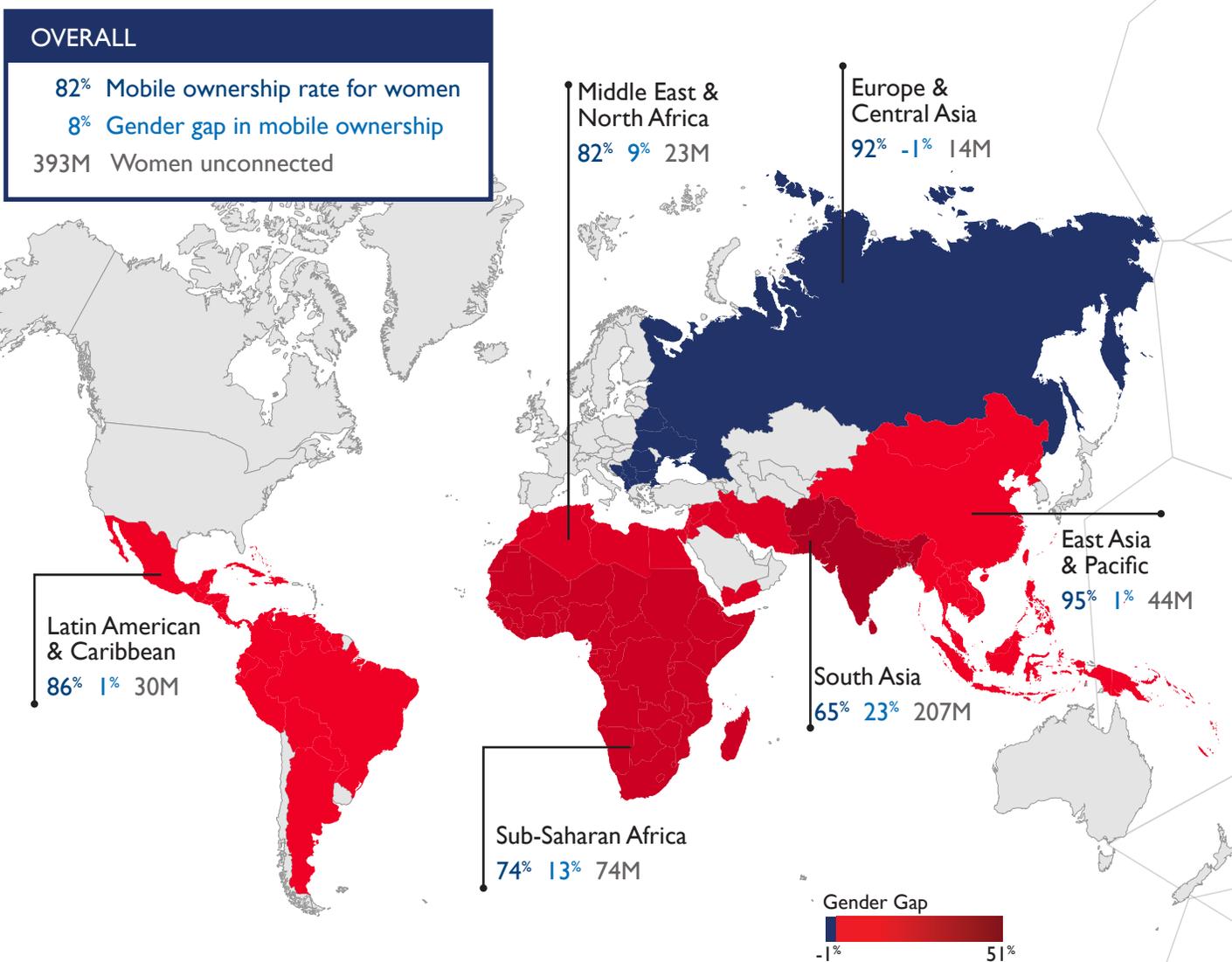
¹⁷ GSMA *Connected Women*, 2020.

¹⁸ ITU, 2019; After Access, 2018a; Global Findex Database, 2017.

¹⁹ The gender gap in mobile ownership and use is the % of male owners/users (as a % of the male population) minus the % of female owners/users (as a % of the female population) divided by the % of male owners/users.

FIGURE 2. GENDER GAP IN MOBILE OWNERSHIP IN LOW- AND MIDDLE-INCOME COUNTRIES, BY REGION

Base: Total Adult population



GSMA Connected Women, 2020.

However, these figures can sometimes mask inequalities within regions: the gender gap in Mozambique and Uganda is 17 percent, compared to 5 percent in Kenya and 4 percent in Senegal. Similarly, the gender gap in mobile ownership in Pakistan and Bangladesh is 38 percent and 29 percent respectively, compared to 23 percent for the region.²⁰ It follows that countries with a large gender gap in mobile phone ownership also tend to have a large gender gap in Internet access²¹ — which is actually often much higher than the mobile ownership gap.

²⁰ GSMA Connected Women, 2020.
²¹ ITU, 2019.

Sharing and borrowing. Country-level studies have found that women are more likely than men to borrow or share mobile phones, often within a household or from a male family member, particularly in those countries with strong gender norms in South Asia and parts of sub-Saharan Africa. For other ICTs, such as computers, women often have restricted access at the household level. If a house does have a computer, women frequently report that it is primarily for their husband, father, or brother, with women getting less priority in usage²² — a pattern that is repeated in mobile phone access and use, and one that is strongly linked to gender norms.

Smartphone ownership. Smartphone ownership, a principal way of accessing the Internet, is 20 percent lower for women than men. This gender gap is larger in certain regions. In India, for example, 37 percent of men own a smartphone, compared to just 14 percent of women. Even in markets with a relatively small mobile gender gap, the gap may widen significantly for smartphone ownership: in Algeria, where the mobile ownership gender gap is just 6 percent, only 55 percent of women own a smartphone compared to 68 percent of men.²³

Mobile use. Even where women do have access, there is a growing and persistent gap in women's meaningful use of mobile, and this gap increases as technologies get more sophisticated and expensive.²⁴ Women tend to use mobiles (and mobile Internet) differently than men, and often less frequently: they tend to use a smaller range of mobile services than men; they use mobile services (other than voice) less frequently and less intensively than men; and they own less expensive and sophisticated handsets, with a large gender gap in smartphone ownership. These gaps are particularly prevalent in sending and receiving SMS, use of mobile money, and use of mobile Internet.²⁵



Photo: Riaz Jahanpour/USAID/Digital Development Communications

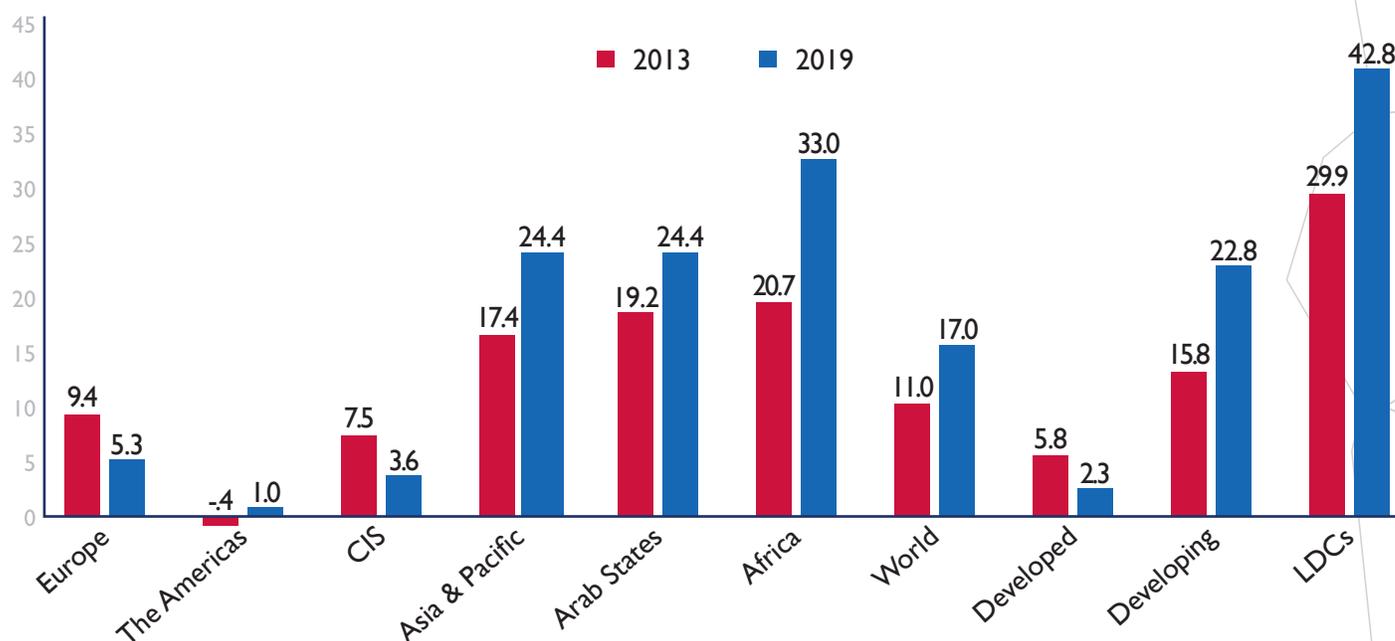
²² Web Foundation, 2015.

²³ GSMA Connected Women, 2020.

²⁴ EQUALS, 2019.

²⁵ GSMA Connected Women, 2020; OECD, 2018.

FIGURE 3. THE INTERNET USER GENDER GAP (%), 2013 AND 2019



ITU, 2019

INTERNET ACCESS AND USE

» ADS 205 Domain: Access and Control

Similarly, women are less likely than men to access and use the Internet. More than half of the world's women are offline: the global Internet penetration rate for women on all devices is about 48 percent, compared to about 58 percent for men, which corresponds to a gender gap of 17 percent.²⁶ Overall, the proportion of men using the Internet is higher than the proportion of women in 75 percent of all countries worldwide. This gap is more pronounced in emerging markets, where it has increased rather than narrowed — particularly in the Middle East, Asia and the Pacific, and Africa (Figure 3).²⁷

Mobile is the primary means of Internet access in emerging markets, particularly for women. In developing countries, 87 percent of broadband connections are mobile,²⁸ and 54 percent of women use mobile Internet.²⁹ However, there is a large gender gap here as well: the GSMA 2020 report highlights that more than 300 million fewer women than men access the mobile Internet in low- and middle-income countries. This represents a gender gap of 20 percent — a decrease from 27 percent in 2019 (Figure 4).

In every region except Latin America, the gender gap in mobile Internet use is wider than the gender gap in mobile phone ownership. The mobile Internet gender gap is widest in South Asia, at 51 percent, followed by sub-Saharan Africa, at 37 percent.³⁰ More women than men in these two regions also report never having tried mobile Internet.

²⁶ ITU, 2019.

²⁷ ITU, 2019.

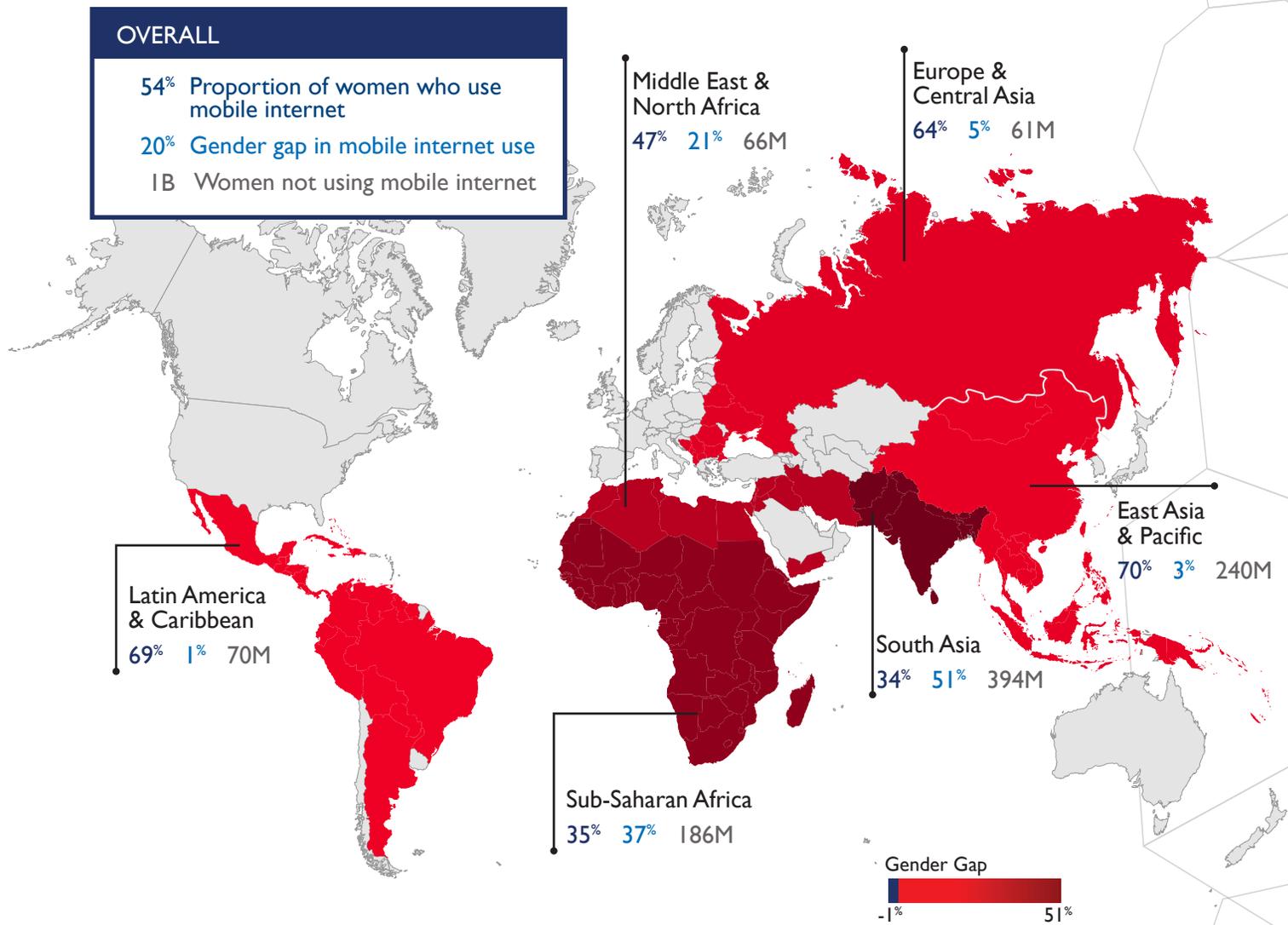
²⁸ ITU, 2019.

²⁹ GSMA Connected Women, 2020.

³⁰ GSMA Connected Women, 2020.

FIGURE 4. GENDER GAP IN MOBILE INTERNET USE IN LOW- AND MIDDLE-INCOME COUNTRIES, BY REGION

Base: Total Adult population



GSMA Connected Women, 2020

While gender inequality in mobile Internet use is greatest in South Asia, this region has also made the most progress. Between 2017 and 2019, the mobile Internet gender gap narrowed from 67 percent to 51 percent. Women in South Asia access mobile Internet at almost the same rate as women in sub-Saharan Africa (34 percent and 35 percent, respectively), whereas in 2017, the rate of mobile Internet use for women in South Asia was 7 percent lower than sub-Saharan Africa.³¹ One factor is the increase in smartphone penetration in these countries, as smartphones have become more available and affordable.

³¹ GSMA Connected Women, 2020.



Photo: Riaz Jahanpour/USAID/Digital Development Communications



BOX 2. A NOTE ON INTERSECTIONALITY

Both the Internet and the mobile gender digital divide are intersectional: a rural, low-income woman is much less likely to be connected than an urban woman. For example, while urban women in Brazil are 2 percent less likely than men to use the mobile Internet, women in rural areas are 32 percent less likely.³⁴

However, research has tended to focus on divides based on singular identities, such as gender or class.³⁵ There is a strong need to generate more research on cross-cutting divides.

There is emerging evidence that this gender gap in mobile phone and mobile Internet use does, in fact, start to close once women acquire smartphones: across 15 countries, the GSMA found that smartphone owners on average had three times as much weekly mobile usage as owners of basic or feature phones, and that many of the gender gaps in mobile ownership and use are reduced if a woman owns a smartphone. In GSMA's 2020 study, women's mobile Internet awareness and use (i.e., the two later stages of the mobile Internet user journey) closely resembled the rates for men, for women who were using smartphones.³² This link between smartphone usage and women's mobile Internet awareness and use should, however, be read with caution, as there may be selection bias: a woman who is a regular Internet user (and therefore able to overcome social barriers to that usage) may be more likely to be a smartphone owner, and at this point the causation is unclear.

However, despite these advances, women are still being left behind. Far more women than men are limited to borrowing or sharing phones, and they are much less likely to use mobile Internet than are phone owners. The Alliance for Affordable Internet found that the gender gap in use of mobile Internet for borrowers was 45 percent in sub-Saharan African, and up to 50 percent in some parts of rural Asia.³³

³² GSMA Connected Women, 2020.

³³ Alliance for Affordable Internet, 2015.

³⁴ GSMA Connected Women, 2019.

³⁵ IDS, 2018.



Photo: Amunga Eshuchi/USAID

HOW DO WE MEASURE AND TRACK THE GENDER DIGITAL DIVIDE?

A crucial part of closing the gender digital divide is to understand it. To do this, stakeholders need to collect more sex-disaggregated gender and ICT data — at national and global levels, but also in activities at a community level. Despite the growing number of reports and documents on the gender digital divide, there is very little statistical data on women and ICTs.

Over the years, advances have been made in promoting collection of sex-disaggregated data on basic ICT access; the UN includes three ICT access measures in its Minimum Set of Gender Indicators.³⁶ However, only 69 countries actually submit sex-disaggregated data on Internet access to the ITU. None of the major ICT or gender equality global indices incorporate technology beyond “access” indicators, such as indicators of mean-

ingful use.³⁷ Apart from the ITU, no other organizations regularly collate sex-disaggregated data on basic ICT access at a global scale.

Other organizations are attempting to collect relevant data at a smaller scale. Demand-side surveys and nationally representative studies (such as the After Access studies and the GSMA Mobile Gender Gap reports) provide country and regional insights on users’ characteristics, preferences, and habits. A more innovative initiative is the use of big data from the [Digital Gender Gaps Portal](#). However, most research is limited to relatively small-scale studies of selected countries. Even the often-cited GSMA Mobile Gender Gap Studies are limited to demand-side datasets from surveys across 15 countries.

³⁶ UN Statistics Division, 2019.

³⁷ Web Foundation, 2018; EQUALS, 2019.

Another challenge is the lack of standardized measurement methods, and methods are often used inconsistently in reports and studies. Different methods produce different results. The GSMA and the ITU define the difference in the Internet penetration rate between men and women in terms of a proportion of the Internet penetration rate for men. The Web Foundation, however, defines it as a proportion of Internet penetration rate *for women*, taking women as their starting point. This lack of standardization gives different results: the Web Foundation's methodology has the Internet gender digital divide as 13.4 percent, compared to the ITU's 2017 figure of 11.6 percent.³⁸

Almost all of the publicly available recent statistics around the gender digital divide relate to adult women over age 18 — mostly because the vast majority of the most recent statistics come from GSMA (and GSMA Intelligence), whose 2018, 2019, and 2020 studies only sampled adults over age 18. The other main source of data is the ITU, which collects data from national statistics offices; while they do collect youth data (e.g., aged 15–24),³⁹ it is not clear whether their sex-disaggregated data only covers adult women (aged 18+) or includes girls aged 15 and over (as their other datasets would suggest). The ITU does not appear to have publicly available age- and sex-disaggregated data for girls aged between 15 and 18.

This fragmented, non-global approach makes it very difficult to track progress on closing the gender digital divide, especially since there are no standardized metrics for women's access to and use of mobile and the Internet. Having these standardized metrics is extremely important to benchmark any work being done, and to measure effectiveness of projects and policies. Having standardized data is also crucial to make informed decisions and policies at national and international levels, pointing to an urgent need for standardization within the ecosystem.



BOX 3. INDICATORS AND METRICS ON THE RISKS OF TECHNOLOGY FOR WOMEN

There is very little national data available on technology risks, and, to date, no standardized metrics. The 2019 EQUALS report states, “globally, data is not systematically collected on most gender issues related to risks. Most indicators are conceptually unclear, lack an established methodology, or are not regularly collected by countries. There is also limited rigorous qualitative or quantitative research on a wide range of issues and contexts, such as negative and unintended consequences of gender-based initiatives.”⁴⁰

GENDER DIGITAL DIVIDE INDICATORS

ITU: PARTNERSHIP ON MEASURING ICT FOR DEVELOPMENT - CORE LIST OF ICT INDICATORS

This core list of 60 indicators can be used to form the basis of ICT data collection in countries. It is used in developing countries by national statistical offices and other official statistical entities to collect individual-level ICT data. These indicators are used by the ITU (and others) to measure Internet access and use, and ITU uses these indicators in their own data portal, facts, and figures and in their Handbooks. However, the indicators are not sex-disaggregated, and some are narrowly focused on computer usage: they use indicators such as “copy and paste” and “transferring files” that are unfamiliar to the majority of the world's technology users who use mobile phones. They also only measure *access*, rather than *meaningful use*.

³⁸ Web Foundation, 2018.

³⁹ ITU, 2019.

⁴⁰ EQUALS, 2019.

ITU: MANUAL FOR MEASURING ICT ACCESS AND USE BY HOUSEHOLDS AND INDIVIDUALS

The ITU uses the Core list of ICT Indicators to collect data from national statistics offices for their annual reports. They have recently started reporting on the Internet gender gap in access, and they have the most comprehensive datasets globally. However, they have been criticized for focusing narrowly on computers rather than mobile Internet usage, and for focusing too much on access. Their methodology for measuring the Internet gender gap differs from others: the ITU defines the difference in the Internet penetration rate between men and women as a proportion of the Internet penetration rate for men.

UNCTAD: MEASURING ICT AND GENDER: AN ASSESSMENT

This report builds on the core list of ICT indicators used by the ITU and others, identifying which existing ICT indicators are currently sex-disaggregated. It takes stock of existing ICT indicators disaggregated by sex, assesses data availability, and identifies main data gaps based on an evaluation of needs and demand for such indicators.

| GENDER DIGITAL DIVIDE DEMAND-SIDE DATASETS

GSMA: ANNUAL MOBILE GENDER GAP REPORT

GSMA uses the annual GSMA Intelligence Survey to collect sex-disaggregated data on mobile and mobile Internet access and use. Their 2020 report, covering data from 18 low- and middle-income countries for adults aged 18 and over, is one of the most widely cited datasets. While GSMA does cover use as well as access, and identifies barriers, it has been criticized for not going far enough to reach very remote women, who most need the benefits or opportunities that mobile can bring. It has also been criticized for not considering meaningful use, by assuming that a woman is a mobile Internet user if she has used the Internet at least once in the last three months, which is a very low benchmark. Like ITU, GSMA defines the mobile and Internet gender gap as the difference between men and women as a proportion of the rate for men (rather than women).

WEB FOUNDATION: VARIOUS RESEARCH REPORTS

The Web Foundation regularly publishes primary research on women's Internet access and use in a few low- and middle-income countries. It provides a [Digital Gender Gap Audit Toolkit](#) to help policymakers develop evidence and monitor country progress towards closing the digital gender gap. The Web Foundation covers meaningful use as well as access, and it explores barriers. Unlike the GSMA or the ITU, the Web Foundation measures the Internet gender gap as the difference between men and women as a proportion of the rate for women, making it female-centered.

WORLD BANK: GLOBAL FINDEX DATABASE

This comprehensive database collects nationally representative data across 140 countries every three years. It primarily focuses on financial inclusion — how adults aged 15 and over save, borrow, make payments, and manage risks. Increasingly, it has included sex-disaggregated data on the use of mobile phones and the Internet to conduct financial transactions. It has four sex-disaggregated ICT indicators, but these focus more on access rather than meaningful use.

DIGITAL GENDER GAPS PORTAL

This portal uses big data to measure global gender gaps in Internet access in real time. Using social media advertising data, it can disaggregate data from the platform by gender, age, language, education level, and location, as well as by user behavior. It uses the social media data to build models to extrapolate and make predictions on the gender gap, not only at the global and national level but also at the subnational and community level. The models correlate with national ITU figures. It is the only dataset to actively collect data for girls under 18 (as social media advertising provides insights on users as young as 13).

AFTER ACCESS

The After Access datasets include data on mobile and Internet access and use across 16 countries in Africa, Asia, and Latin America, using surveys that are nationally representative, along with a methodology that allows comparisons across all countries. The datasets focus on both access and meaningful use. Data is available for 2005 to 2008, 2012, and 2017. The data is not released regularly and so they are useful for country snapshots, but not necessarily for panel or time series analysis.

| GENDER DIGITAL DIVIDE TOOLKITS

USAID GENDER AND ICT SURVEY TOOLKIT

The toolkit, with its ready-built qualitative and quantitative tools, is designed to help implementing partners and development practitioners collect baseline sex-disaggregated data on ICT access and use and incorporate

the tools into their routine monitoring and evaluation activities. The tools are designed to provide development practitioners with deep insights on wider connectivity issues at the individual or community level. While the data collection tools are not mapped explicitly to any standardized global metrics, they have been deliberately designed to be user-friendly to non-academics, while at the same time drawing on both GSMA and Web Foundation survey questions and indicators. They will be particularly useful to understand the social and power dynamics of technology and the risks, as the toolkit covers behavioral themes such as control, ownership, and perceptions.

GSMA WOMEN AND INTERNET RESEARCH TOOLKIT

The toolkit has qualitative and quantitative tools to help practitioners measure and understand women's Internet access and use, at the national and subnational level. While it has been mapped to the ITU's Core ICT indicators, it has added a gender lens, and it focuses on both access and meaningful use. It is particularly useful to understand the social and power dynamics of technology and its risks, as it covers behavioral themes such as control, ownership, and perceptions.

The Digital Gender Gaps Portal is the only dataset to actively collect data for girls under 18.



Photo: pixelfusion3d/Getty Images/Stock



Photo: gawrav/Getty Images/Stock

WHY DOES THE GENDER DIGITAL DIVIDE EXIST? WHAT ARE THE BARRIERS?

The key reasons behind women’s restricted access and use of mobile and Internet technology are interrelated and complex but are grounded in global gender inequality. Thus, there is a negative feedback loop: “gender inequality informs unequal access to and use of ICT, and the subsequent growth in ICT deepens gender inequality.”⁴¹ The divide is not a simple matter of counting women with access to technology: addressing the gender digital divide will require addressing the underlying gendered social norms and power imbalances that act as barriers to women’s access to digital dividends.⁴² One of the primary reasons women bear such a disproportionate burden of poverty is their lack of access to the very information that could assist them in achieving their development and empowerment goals.

To understand the barriers, however, they can usefully be categorized into four areas (Affordability, Availability, Ability, and Appetite),⁴³ and they can be mapped to the USAID [ADS 205](#) domains.

| AFFORDABILITY: COST

» *ADS 205 Domain: Access and Control*

Affordability is one of the principle drivers of digital inclusion, and it is a key barrier to women’s access and use. This is most apparent for women from rural areas and those from lower income groups.⁴⁴ Because of social norms, women are often less financially independent than men and have lower levels of income (women often earn between 30–50 percent less than men⁴⁵). Since women are thus more price-sensitive than men, they tend to have less sophisticated devices and poor user experience.⁴⁶ They also have less disposable income to spend on mobile phones or Internet services.

If the costs of utilizing digital technology and services are too high, it becomes cost prohibitive for women to use them. This is particularly problematic to efforts to support women and girls in low-resource communities as they often do not have the means to pay for devices and exorbitant fees, taxes, or pricing plans.

41 OHCR, 2017.
42 IDS, 2018.
43 Huawei, 2015.

44 GSMA Connected Women, 2020.
45 Alliance for Affordable Internet, 2015.
46 Web Foundation, 2016.

AVAILABILITY: LACK OF INFRASTRUCTURE AND ACCESS

» *ADS 205 Domain: Access and Control*

Low levels of network quality and coverage create additional barriers for women and girls. Women's choice of network is often restricted by factors such as more basic handsets (women are less likely to have smartphones and more likely to have feature phones that do not support mobile Internet use), cost of data, and fewer choices of SIM — which are in turn determined by social norms and underlying gender inequalities.

Women who live in poor and remote areas are especially affected, as there are significant gaps in Internet coverage and adoption in poor and low-income areas. Africa has the lowest penetration of worldwide Internet use at 39 percent and fifteen countries, including Eritrea and Madagascar, have less than 10 percent of their population online.⁴⁷

ABILITY: USER CAPABILITY AND DESIGN

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use*

Women's use of mobile and Internet platforms is often limited by their lower levels of technical and digital literacy skills, as well as by their lack of confidence in using technology and the lack of relevant content for women's needs, including in local languages. Women also tend to report a lower level of understanding of the potential of the Internet, and a perceived lack of value. There is strong evidence that mobile and Internet access and use follows broader social patterns of deep social exclusion of women and girls; women are disadvantaged in their access and use of technology because of underlying social conditions, including lower levels of education.

DIGITAL LITERACY AND SKILLS

» *ADS 205 Domains: Access and Control*

Digital literacy and skills are rapidly emerging as one of the biggest barriers facing women, especially in achieving online access. Digital literacy includes both the skills to functionally be able to use the Internet and digital technologies, as well as the knowledge of how to do so safely, securely, and with trusted information and protected data.

The lack of digital literacy is a persistent barrier to adoption and use of technology in developing countries since there are gaps in the functional ability of certain groups to fully use these digital tools. In many countries, gendered inequalities mean that more women than men are illiterate or have lower levels of education, and as a result, women often lack the digital skills or confidence needed to use the Internet. If they do achieve Internet access, they may therefore have restricted use, with only a limited number of services and applications.⁴⁸ More women than men report difficulties in using technology and trouble reading content or language, and more women than men report needing more help from others in using more complex features.⁴⁹ Poorly designed handsets and content not in the local language present more of a barrier for women than for men.

In many countries, gendered inequalities mean that more women than men are illiterate or have lower levels of education, and as a result, women often lack the digital skills or confidence needed to use the Internet.

⁴⁷ Internet World Stats, 2020

⁴⁸ GSMA and LIRNEAsia, 2015; Web Foundation, 2015.

⁴⁹ Girl Effect, 2018; OECD, 2018.

This digital literacy barrier becomes particularly important for employment opportunities since over 90 percent of jobs worldwide have a digital component and, without these skills, women often do not have the confidence to participate in the digital workforce.⁵⁰

EDUCATION

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use*

It is increasingly clear that the gendered barriers to women's participation are symptoms of an underlying wider gender inequality. Moreover, the link between lower levels of income and education and the gender digital divide is becoming well documented.⁵¹ The most influential study is by Research ICT Africa, who found that statistically controlling for income and education eliminates the gender digital divide in most African countries. In other words, inequitable access to education for girls, resulting in lower levels of employment and income, ultimately contributes to the gender digital divide overall.⁵² This finding is supported by other research studies based on large-scale data sets from Africa and Asia, such as the After Access studies conducted by Research ICT Africa and LIRNEAsia in 2019.

The Web Foundation's study of women across nine low-income countries in Africa and Asia found that women who have some secondary education or who have completed secondary school are six times more likely to be online than women with only primary education or less, suggesting that education is a major enabler of digital empowerment among women.⁵³ There is also a strong link between gender parity in tertiary education enrollment and gender parity in Internet use.⁵⁴ Evidence from GSMA also shows that female mobile non-users (and borrowers) tend to have lower levels of education; and less educated women are more likely to report problems using mobiles and the Internet, as well as more issues with technical literacy, confidence, and understanding content.⁵⁵

SOCIAL NORMS AND UNDERLYING GENDER INEQUALITY

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use; Patterns of Power and Decision-Making*

There is strong evidence that mobile and Internet access and use follows broader social patterns, echoing the deep social and cultural exclusion of women; that is, women are disadvantaged in their access and use of technology because of underlying social conditions. In fact, when women have the same opportunities and access to mobile and the Internet as men, they may become more frequent and active users⁵⁶ — but giving them the same opportunities and access would involve tackling social norms which limit women's and girls' access to education and technology.⁵⁷



50 Plan International, 2020.
51 Broadband Commission, 2017.
52 Research ICT Africa, 2012.
53 Web Foundation, 2015.

54 Web Foundation, 2016.
55 GSMA Connected Women, 2020.
56 Research ICT Africa, 2012; Girl Effect, 2018.
57 EQUALS, 2019; Web Foundation, 2018.

Social norms in many countries determine women's ability to earn an income, to make financial decisions, to enter the public sphere, to be educated, and to have access to technology. Men may be enabled to act as gatekeepers to technology, particularly in South Asia, where women often report that their male relatives forbid them to use mobile or the Internet, or only allow access in a very controlled manner.⁵⁸

Even if a woman is online or has a mobile device, social norms may create negative social connotations of women using mobile technology that serve as a further detractor to their active engagement with the tool. A study in Pakistan found that use of mobile Internet can be used to reinforce gender norms and behaviors: women use the private WhatsApp platform while men participate in the public Facebook arena, reinforcing the public-private divide for Pakistani women.⁵⁹ Similarly, a study of the digital lives of adolescent girls across Africa and Asia found that girls often internalize negative ideas that mobile and the Internet can be unsafe for girls, with many reporting that mobile phones could lead them astray and they did not want to have them.⁶⁰



Photo: Ashish Bhattacharjee

APPETITE

» ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use; Laws and Policies

One of the biggest growing barriers is around appetite – that is, the awareness, desire, and fear for women and girls to use technology. Security, privacy and harassment risks, as well as a perceived lack of relevance of the Internet and of content, is actively putting female users off using technology; these risks are underpinned by social norms and are disproportionately more acute for women than for men.

SAFETY, SECURITY, AND HARASSMENT

» ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use; Laws and Policies

There are safety and security risks associated with online and mobile access and women and girls face a disproportionate amount of digital harm. These concerns often act as a serious deterrent to women's and girls' technology use – and again, are underpinned by gender norms and power imbalances. In environments which discourage women's use of digital technology, going online can pose a safety risk to women and girls breaking the traditional social order.

⁵⁸ Ibtasam et al., 2019.

⁵⁹ Schoemaker, 2015.

⁶⁰ Girl Effect, 2018.



More women than men report difficulties in using technology and trouble reading content or language.

Issues include a fear of harassment from strangers (such as unsolicited calls, unsolicited SMS, unsolicited online messages, or cyberbullying and harassment), as well as concerns about online data security and privacy. Safety, security, and harassment risks are particularly acute for Internet and social media use — and, again, it is amplified in South Asia and other regions with strong gender norms and cultural perceptions about what women should and should not do.⁶¹

A reported 50 percent of adolescent girls across low- and middle-income countries respond that they don't own phones because their parents are worried about their safety while online and about being contacted by strangers.⁶² Similarly, a recent study of Brazilian teenagers found that both boys and girls aged 11–17 believe that parents are more restrictive and controlling of girls' use of the Internet than that of boys, and many attribute this difference to gendered norms of what is appropriate or acceptable for girls.⁶³

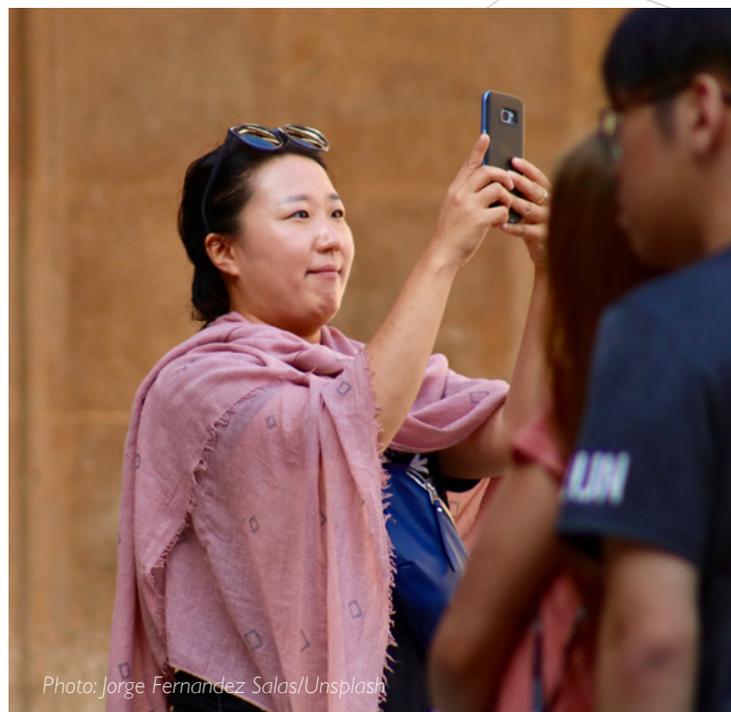
Once online, intimidation and harassment may inhibit women from fully engaging with the Internet, restricting their use. Amnesty International found that the abuse women experience on Twitter leads them to reduce how much they engage, reduce their interactions, and sometimes stop using it altogether.⁶⁴ These issues are covered in more detail in the section on risks.

LACK OF RELEVANCE

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use; Laws and Policies*

Women also tend to report a lower level of understanding of the full potential of the Internet, and thus a perceived lack of value.⁶⁵ Many women who are meant to benefit from digital development programs see no reason to be online. A study in 2015 found that over 30 percent of female non-Internet users in Asia didn't use the Internet because they either didn't know how to do the things they wanted to do online, or they didn't think the Internet would be of use to them for their particular needs.⁶⁶ Similarly, in Bangladesh, 37 percent of female non-mobile Internet users state that they don't use the Internet because they view it as not relevant to them.⁶⁷

Localization of content and ease of use can also be barriers as thousands of unwritten languages — some with a base of millions of speakers — are not represented in the digital form and women's digital literacy tends to be low.



61 GSMA Connected Women, 2020.

62 Girl Effect, 2018.

63 EQUALS, 2019.

64 Amnesty International, 2018.

65 EQUALS, 2019.

66 Google, 2015.

67 GSMA Connected Women, 2020.



Photo: Alexandra Tyers

THE GENDER DIGITAL DIVIDE FOR GIRLS UNDER THE AGE OF 18

Almost every study and report on the gender digital divide has focused on women over age 18, as do most of the statistics cited in this literature review. There is very limited global research about younger girls' (and boys') access to and use of mobile phones; this may be changing, as the UNICEF Gender and Innovation team are actively using big data (working with the University of Oxford and Qatar Computing Research Institute) to examine the gender digital divide for girls aged 13 to 18 using the Digital Gender Gap Portal.

The 2018 Girl Effect study is the first comprehensive global study into adolescent girls and mobile technology. Drawing on the experiences of more than 3,000 girls and boys from 25 countries, the research sheds light on how girls are accessing, or trying to access, mobile phones and the Internet. (Note that the study only covered current mobile users, and not the perspectives of non-mobile users.)

| ACCESS AND OWNERSHIP

» *ADS 205 Domain: Access and Control*

While the Girl Effect does not provide a global figure for ownership (unlike GSMA), it does show that ownership patterns vary widely. Just 15 percent of girls in their Malawi sample owned a phone, compared to 99 percent in the United States. Girls are getting access to phones, however, regardless of ownership limitations. Access is much more diverse than simply whether they have or do not have a phone; it is often transient, as diverse ownership, borrowing, and sharing practices are flourishing. Girls indeed go to great lengths to gain access. They are active agents in achieving their own access, and in some cases may have secret phones. Many borrow a device from their parents, siblings, or friends: 52 percent of girls must borrow a mobile phone if they want access, compared to 28 percent of boys. Staying in touch with family is one of the most common arguments girls use to persuade their parents to lend them their phone.

Smartphone ownership is relatively common, but there is still a gender divide. Those girls who do own a phone are more likely to have a smartphone than a basic phone, but boys are 1.5 times more likely to own a phone and 1.8 times more likely to own a smartphone.

USE

» *ADS 205 Domain: Access and Control*

Echoing findings for adult women, when girls have less access to mobile technology, they have fewer opportunities to learn to use mobiles in ways that benefit them — and they perceive the phone as being more dangerous than girls who have more access. Boys are more likely to use phones in more diverse and Internet-enabled ways than girls, and they are more likely to use phones for activities requiring an Internet connection; overall, boys use far more phone features and capabilities than girls. The biggest gap is in Internet use: while numbers are roughly similar for voice calls (73 percent of girls and 74 percent of boys make calls), only 27 percent of girls use their phone for Internet (vs. 46 percent of boys), 29 percent of girls use Facebook (vs. 44 percent of boys), and 22 percent of girls use WhatsApp (vs. 35 percent of boys). Girls also have much lower awareness of the Internet than boys.

Without regular access, girls cannot develop digital literacy by familiarizing themselves with the phone and exploring its uses; irregular access prevents girls from learning incrementally. Girls often do not have anyone who can help them explore the phone and show them new features, especially if they are using it in secret. This can put girls more at risk. There is also evidence of a link between social norms and access and use: in contexts where girls have more freedom and agency in general, they are more likely to have better access to phones and to reap more of the benefits; they report being able to connect with new people, use phones to help their studies, and learn new things. In addition, their digital literacy is higher, and they are better able to manage the perceived risks of being online.

BARRIERS TO ACCESS AND USE

Like adult women, girls experience many more barriers to access and use of technology than boys, mainly in the areas of Affordability, Ability, and Appetite.

Affordability (*ADS 205: Access and Control*). Affordability can be a major barrier for both girls and boys. However, girls often face a range of social barriers which can overtake the issue of affordability, unlike adult women or boys. These barriers are outlined in more detail under Ability and Appetite.

Ability (*ADS 205: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use*). Girls report that phones, apps, and digital platforms are not currently designed for the ways in which girls use them (such as shared use and borrowing) or might want to use them in the future; this in turn limits their usage. This is like the situation of adult women: because too few women and girls are involved in the design and development of digital technologies, their needs and priorities are rarely considered in product and service design. Girls also have lower levels of digital skills than boys — or believe that they do⁶⁸ — which further limits their usage.

Only **27%** of girls use their phone for Internet (vs **46%** of boys), **29%** of girls use Facebook (vs. **44%** of boys), and **22%** of girls use WhatsApp (vs. **35%** of boys).

Appetite (*ADS 205: Access and Control; Cultural Norms and Beliefs; Gender Roles, Responsibilities, and Time Use; Laws and Policies; Patterns of Power and Decision-Making*). Much as for adult women, social norms limit girls' access and use of phones and the Internet. Girls can internalize negative societal perceptions: several are reported saying that mobile phones or the Internet could lead them astray. Girls who have more freedom and agency, and therefore more access, are more positive about the benefits of a phone. While nearly half

68 UNESCO, 2019.



Photo: triloks/Getty Images/iStock

of girls say they don't own mobiles because their parents are worried about their safety (Figure 5), the ability of a phone to keep a girl safe (by ensuring she can contact her family) is also the main reason that parents decide to allow or provide mobiles.

Girl Effect found that girls also worry about the risks they might be exposed to through mobile and mobile Internet, particularly when it comes to social media. However, girls who experience more social restrictions appear more likely to internalize ideas that mobiles and the Internet can be unsafe. Far more needs to be done to equip parents and young people with the knowledge of how to stay safe on their mobile phones and online.

Similarly, a study in Brazil⁶⁹ of young people's access, use, and activities online found significant gender differences among boys and girls aged 11–17: girls and boys manage their privacy settings differently (to limit their intended audiences), and digital skills prove to be particularly relevant for this. As in the Girl Effect study, both boys and girls in this age group believe that parents are more restrictive and controlling of girls' use of the Internet, and many attribute this difference to gendered norms of what is appropriate or acceptable for girls. Girls reported having more concerns about their personal information online being exposed to risky situations, and they are also more likely to suffer negative consequences from these risks than boys. Non-consensual disclosure of nude photos appears to

be a common practice that affects youths' lives. This practice is gender-based: girls' photos are disclosed by boys, without consent. The consequences of such actions are perceived as extremely problematic for girls, with consequences ranging from changing schools to depression and suicide attempts. Both girls and boys say they do not know how to proceed, or whom they would turn to, in situations of non-consensual disclosure of nude photos.



FIGURE 5. THE MAIN REASON FOR GIRLS' NOT OWNING A MOBILE PHONE

Girl Effect, 2018

⁶⁹ EQUALS, 2019.



Photo: Paula Bronstein/Getty Images/Images of Empowerment

WHY IS IT SO IMPORTANT TO CLOSE THE GENDER DIGITAL DIVIDE?

Technology enables access to critical health services and opportunities for education, civic participation, employment, entrepreneurship, and access to financing that were once out of reach for many people. It acts as a vital gateway for women to access information that can improve their livelihoods and significantly enhances their ability to contribute to their families and the global community.

Both male and female users increasingly report positive benefits of mobile and the Internet: it makes them feel safer, and it provides access to important information that assists them in their daily lives and that they would not have received otherwise. Those who use mobile Internet rather than just mobile communication report even greater benefits.⁷⁰

This access to opportunities that technology can bring is particularly important for women and girls: technology offers “leapfrog” opportunities for women and girls to overcome hurdles they may face in the physical world, enabling them to reach their full economic potential and create more self-reliant communities. Mobile phones and the Internet connect people and ideas, allowing women to share and access knowledge, information, and markets, regardless of where they are or what time of day it is. One of the commonly cited opportunities that mobile and the Internet can bring for women and girls is flexibility: by being able to use technology anytime, anywhere, it gives agency. This flexibility can help overcome gendered mobility or time constraints, help women earn their own income, and help create a sense of choice and control.⁷¹

⁷⁰ GSMA Connected Women, 2020.

⁷¹ Kleine, 2010.

This is the reason Sustainable Development Goal (SDG) 5B has a focus on technology: it recognizes how “enabling technology, in particular information and communications technology” can be used to promote the empowerment of women and girls. Yet, just as digital technology is accelerating opportunities and impact around the world, women are being left behind, with the gender gap in the physical world replicated in the digital world.

Although the evidence base on long-term, longitudinal outcomes for women and girls remains limited, some emerging evidence and studies show how technology can benefit women and girls in specific sectors, as discussed in the following section.

ECONOMIC ACTIVITY AND EARNINGS

» *ADS 205 Domain: Access and Control; Power and Decision Making; Gender Roles, Responsibilities, and Time Use*

» *USAID Sectors: Economic Growth and Trade*

One of the largest evidence bases of the positive benefits for technology for women is in labor force participation and business. Access to mobile and the Internet offers female entrepreneurs increased access to markets, services, and information, helping smooth the path to self-reliance through economic activity. Smartphones also offer more privacy and confidentiality when online — a big concern for female entrepreneurs.⁷² Finally, women with daily Internet access are three times as likely to see their income increase as a result of the Internet as do infrequent users.⁷³ These increasing opportunities for female entrepreneurs are crucial for WEEGE: women-led businesses have been shown to significantly outperform their male peers, growing revenues 1.5 times as fast and creating jobs twice as fast as male-led businesses.⁷⁴ Economies with higher levels of female entrepreneurial activity are more resilient to financial crises and experience economic slowdowns less frequently.⁷⁵ If women were to fully participate in the economy identically to men, this would contribute \$28 trillion (26 percent) to annual global GDP by 2025. A good example of how technology has been used for women’s access to markets is the International Trade Centre’s [She Trades](#) app. This is a platform for female entrepreneurs that connects them to markets, by connecting buyers with sellers, and offers online training on business skills; it aims to connect over 3 million female-led businesses to markets across the world.

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⁷² OECD, 2018.

⁷³ Web Foundation, 2015.

⁷⁴ USAID, 2018.

⁷⁵ Meunier, Krylova and Ramalho, 2017.

One of the biggest barriers for female entrepreneurs is access to credit and access to finance. Women-owned businesses are financially underserved, with a credit gap of \$260–320 billion for formal small and medium enterprises;⁷⁶ the typical male-owned firm in Africa has over six times the capital investment of the typical female-owned enterprise.⁷⁷ Financial technology and access to mobile and the Internet can help overcome this gap for women by offering opportunities for women to increase revenues and savings, making them more resilient to risk. Mobile and mobile services have also increasingly been used to assess credit-worthiness and lending for female-led businesses, where more traditional financial institutions are not engaged.⁷⁸ Innovative credit-scoring techniques for women using digital platforms, such as psychometric testing in Ethiopia and Peru, have also increased women's access to credit and finance (although it should be noted that psychometric testing has many risks associated with it).⁷⁹

Access to and use of digital finance is a big driver in women's economic empowerment more broadly. Recent evidence from Kenya found that female-headed households using M-PESA (a mobile money provider) through their mobile phones experienced greater increases in consumption than male-headed households.

These impacts appear to be driven by changes in financial behavior — in particular, by increased financial resilience and saving — and also by labor market outcomes, through a shift in women's occupations from subsistence farming to business and retail occupations (with 185,000 women moving from farming into business occupations). This shows that access to and use of mobile money can positively impact women in particular; the women in the study were more financially resilient in part because of having more control over how and when money was saved and spent, through their mobile money accounts.⁸⁰

Financial technology and access to mobile and the Internet can help **overcome [the credit] gap** for women by offering opportunities for women to increase revenues and savings.



Photo: bernardbodo/Getty Images/iStock

76 IFC, 2013.

77 World Bank, 2019.

78 OECD, 2018.

79 World Bank, 2019.

80 Suri and Jack, 2016.



Photo: Paula Bronstein/Getty Images/Images of Empowerment

EDUCATION

- » *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Cultural Norms and Beliefs*
- » *USAID Sectors: Education*

Globally, and particularly in emerging markets, girls often have fewer years of school than boys. Girls are more likely to drop out before completion, which can contribute to lower levels of literacy and lower levels of income. Mobile phones and the Internet can help bridge this education gap, by providing education and training opportunities for school-aged girls as well as for adult women, meeting female learners where they are and giving them opportunities for “any time, any place” learning through their devices.

By bringing learning into the private sphere, women and girls have greater control of their learning and knowledge development, allowing them to juggle learning with work or domestic duties. Educational technology (edtech) is also particularly useful for reaching girls living in remote areas.

Many edtech products and services have been created specifically to reach women and girls, allowing them to access online or mobile courses, often delivered in the form of audio, videos, tutorials, and “how to” types of instruction that reduce the reliance on written textbooks, for learners with lower literacy levels. This may in turn increase adult women’s awareness about possible education programs for their children, potentially leading to improved education outcomes for children through increased participation in secondary or even tertiary education.⁸¹ Some interesting examples of edtech solutions for women and girls include Mobilink in Pakistan, a mobile-based literacy program for girls who are out of school or illiterate, providing female users literacy training materials through their mobile,⁸² and the Tigo Biashara service in Tanzania, delivering business skills training through voice to rural women (and men) on their mobile phones.⁸³

⁸¹ OECD, 2018.

⁸² UNESCO, 2013.

⁸³ GSMA Connected Women, 2015a.

HEALTH

- » *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Power and Decision-Making; Cultural Norms and Beliefs*
- » *USAID Sectors: Global Health*

As with other sectors, in the health space access to and use of mobile and the Internet gives women increased access to information. This in turn can increase their access to treatments and healthcare, especially maternal health. Giving life-saving information to women through mobile or Internet can shape healthy behaviors to address the main causes of maternal, newborn, and child deaths (for example, information about safe delivery of babies and preventive prenatal and postnatal care). This improved knowledge and health can help to strengthen women's agency and empowerment, enhancing their knowledge, decision-making power, participation in society and markets, and income generation.

Women's access to information through mobile and the Internet can also improve health and livelihoods outcomes for all members of the family: the children of better-informed women are more likely to be healthy.

Moreover, since women are more likely to reinvest their income back into their families, informed women are more likely to spend on their children's education and healthcare. Each additional year of education increases a girl's income later in life by 10–20 percent.⁸⁴

A good example of how technology can be used for health outcomes for women is the Kilkari mobile service in India, reaching 8.95 million women with life-saving messages about pregnancy, childbirth, and childcare — sent directly to the women's (and their family members') mobile phones.⁸⁵

mHealth can also benefit women more indirectly, by allowing data collection through technology that may complement socioeconomic statistics, especially in areas where data is scarce. In Tanzania, for example, mobile phones have helped to facilitate birth registrations by mothers, as part of improving health, education, and other public services.⁸⁶

The Kilkari mobile service in India, reached **8.95 million women** with life-saving messages about pregnancy, childbirth, and childcare.



Photo: Afandi Djauhari/NetHope

84 Suri and Jack, 2016.

85 OECD, 2018.

86 UNESCO, 2013.

Women's access to information through mobile and the Internet can also improve health and livelihoods outcomes for all members of the family.



AGRICULTURE

- » *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Power and Decision-Making*
- » *USAID Sectors: Agriculture and Food Security; Environment and Global Climate Change*

Women make up 43 percent of the agricultural labor force in developing countries, and 59 percent in sub-Saharan Africa.⁸⁷ Yet women farmers face a number of key structural barriers that limit their access to land, information, finance, infrastructure, technologies, and markets — such as access to finance or credit, access to information, and control over land. All of these barriers make them particularly vulnerable to climate change.⁸⁸

If women farmers had the same access to resources as men, agricultural production in developing countries would increase by 2.5–4 percent, translating to a 12–17 percent reduction in global hunger (equating to 100–150 million fewer hungry people).⁸⁹

Mobile phones and the Internet can help bring more women into agriculture, and help to overcome these structural barriers, by (1) providing information on production, storage, prices, transportation, or weather; (2) providing access to digital finance or access to credit through mobile banking and savings; and (3) providing access to markets and farmer cooperatives through social media or messaging platforms.⁹⁰

GOVERNANCE, VOICE, AND PARTICIPATION

- » *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Power and Decision Making; Laws and Policies*
- » *USAID Sectors: Democracy, Human Rights, and Governance*

Giving women and girls access to new information, skills, and networks through mobile devices and the Internet has increased their confidence, decision-making power, ability to speak up, and civic participation. Through learning new skills and using digital platforms, women and girls have been able to build self-confidence, increase their economic power and independence, and make better-informed decisions; mobile and Internet can enable women to communicate with peers online, to exchange information and build solidarity, and to lobby decision-makers.⁹¹ Women using the Internet in emerging markets often report that they increasingly recognize and value the Internet as a space for commentary on important issues, and report that the Internet has made it safer for women to express their views.⁹² Note, however, that the opposite can also occur, as discussed in more detail in the section on risks.

87 GSMA Connected Women, 2015a.

88 GSMA Connected Women, 2015a.

89 GSMA Connected Women, 2015a.

90 UN Women, 2019.

91 Suri and Jack, 2016.

92 OECD, 2018.

Internet use can also make women and girls more aware of their rights, including on governmental support and pension rights, and there is evidence that women's increased access to mobile and the Internet has increased female participation in government elections.⁹³ A good example is the 321 mobile service in Madagascar. This service gave users information about their rights and the laws regarding education and gender equality, among other areas. Many female users reported reduced instances of GBV in the household; knowing their legal rights, and what the law can do to protect them, gave these women the confidence to stand up to their husbands. Many male users also reported greater knowledge of women's rights and GBV, which led to changes in their own behavior.⁹⁴

| WATER AND SANITATION

» *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Power and Decision-Making*

» *USAID Sectors: Water and Sanitation*

Women and girls are often disproportionately affected by the lack of a safe water supply and sanitation facilities. Women and girls usually bear the responsibility for collecting water for the household, leaving them with little time for income-generating activities or attending school. It also makes them more vulnerable to harassment or sexual assault while collecting water, or when using a toilet or open defecation site. Poor sanitation makes managing menstruation more challenging and can often cause girls to miss school when on their period.⁹⁵

Access to and use of technology has helped overcome some of these issues for women and girls. In Niger, CityTaps installed prepaid water connections and pumps in households and communities; customers paid for the water using mobile money, rather than going through the water utility. Women in the community particularly benefited: 90 percent of female customers reported a significant reduction in the time they spent collecting or paying for water, freeing them for other activities, such as running businesses. They also reported much higher levels of safety: women were sometimes robbed on their way to pay the bill at the water utility office, and this has now virtually stopped.⁹⁶

Similarly, low-cost toilets were installed in houses in Madagascan slums, using mobile money plans for customers to spread out their payments, making it more affordable for female customers to have increased privacy, safety, and better hygiene when using the toilet.⁹⁷

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CityTaps program.

⁹³ UNESCO, 2013.

⁹⁴ GSMA Connected Women, 2015a.

⁹⁵ WaterAid, 2020.

⁹⁶ CityTaps, 2020, personal communication.

⁹⁷ Loowatt, 2020, personal communication.

ENERGY

» *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Power and Decision-Making*

» *USAID Sectors: Environment and Global Climate Change*

Women and girls have less access to affordable, clean, and renewable energy services than men, for example, because of social norms around financing and access to electrical connections.⁹⁸ They also are disproportionately affected by low-quality energy resources. For example, women and girls are much more likely to have health problems due to cooking indoors with low-quality fuels such as kerosene.⁹⁹

New innovations in technology that give increased access to clean energy can help overcome these gendered issues, with empowering effects on women and girls in particular. For example, Pay-As-You-Go (PAYG) solar home systems, that allow users to pay for their energy through mobile money, can help reduce women's and girls' time spent collecting fuels. A better energy supply can also increase their access to information, by providing a reliable electricity source for phone battery charging and can help them better manage household finances by using digital finance to budget and pay bills.

Solar home systems that integrate mobile money have also been used to increase female entrepreneurs' access to credit: monthly repayments on lease-to-own solar home systems have been used to establish credit ratings, and so increase women's access to capital.¹⁰⁰ Similarly, PAYG clean cooking stoves that leverage digital finance (like the KopaGas cooking stoves in Tanzania and Kenya) have not only opened up access to finance for female entrepreneurs through credit scoring, but also improved women's employment opportunities as they use the cookstoves for their businesses (e.g., by selling food).

These PAYG clean cookstoves and solar home systems also improve health outcomes for women and girls, through improved air quality and reduced indoor air pollution.

They also increase their personal safety, in no longer having to collect firewood in unsafe areas at the risk of being attacked or sexually assaulted and having access to lighting that makes it safer for them to move around.¹⁰¹



Photo: Ashish Bhatteerchajee

98 UNDP, 2017a.

99 Ashden, 2017.

100 BTCA, 2019.

101 SDD, undated.

EMPOWERMENT AND SOCIAL COHESION

» *ADS 205 Domains: Access and Control; Gender Roles, Responsibilities, and Time Use; Power and Decision-Making*

» *USAID Sectors: Cross-cutting*

Besides such sector-specific interventions, there is also evidence of the broader benefits of mobile and the Internet for women and girls, in terms of empowerment and social cohesion. Increased access to information through technology ultimately makes women feel safer, more autonomous, and self-confident.¹⁰² 68 percent of women in low- and middle-income countries report feeling safer with a mobile phone, and 58 percent feel more independent.

This is not true just for female users, but also for their community and networks. For younger girls, this is a major reason for owning a phone; the ability of a mobile to keep a girl safe by ensuring she can contact her family is often the main reason parents allow or provide a mobile device.¹⁰³

In addition, 64 percent of women say that having a mobile phone and access to mobile services saves them time, and 60 percent say it saves them money.¹⁰⁴ For example, in Côte D'Ivoire the government has introduced paying school fees and teacher salaries through mobile money, thus reducing the risk of armed robbery for schools and for teachers (the vast majority of whom are female). Mothers also benefit, as they no longer stand in long queues to make cash payments for their children's school fees, and thus have more time for income-generating activities.¹⁰⁵

¹⁰² OECD, 2018.

¹⁰³ Girl Effect, 2018.

¹⁰⁴ GSMA Connected Women, 2015.

¹⁰⁵ GSMA MMU, 2016.

¹⁰⁶ GSMA Connected Women, 2019

PRIVATE SECTOR ENGAGEMENT: CLOSING THE GENDER GAP MAKES GOOD (BUSINESS) SENSE

Clearly, there are huge social benefits in ensuring that women and girls have access to mobile technology and the Internet, and that they are not left behind. As the [USAID Digital Strategy](#) states, "a country's progress toward self-reliance will be stymied if members of that country's citizenry cannot benefit equally from the gains of a global digital ecosystem."

There is also the business angle to consider: investing in women, and closing the gender digital divide, makes good business sense. GSMA reports that, over five years, closing the gender gap in mobile Internet use in low- and middle-income countries can deliver an additional \$700 billion in GDP growth, while closing the gender gap in mobile ownership and use in those countries could create \$140 billion added revenue for the mobile industry.¹⁰⁶

This is particularly significant, as private sector involvement will be critical to successful mobile strategies. Given that a key component of both USAID's Digital Strategy and the [Private Sector Engagement Strategy](#) is partnering with the private sector, closing the gender digital divide makes sense, both socially and commercially.

Countries can deliver an additional **\$700 billion** in GDP growth, while closing the gender gap in mobile ownership and use in those countries could create **\$140 billion** added revenue for the mobile industry.



Photo: gawrav/Getty Images/Stock

WHAT ARE THE RISKS AND NEGATIVE EFFECTS OF TECHNOLOGY FOR WOMEN?

As we have seen, closing the gender digital divide is a crucial part of realizing USAID's core objective of increasing women's economic empowerment and gender equality. Technology can be considered a great equalizer, giving women and underrepresented populations access to finance, new markets and business opportunities, education, health, agriculture, and other life-enhancing services, as well greater security, more time-savings, and a voice.

In line with the USAID Gender Equality and Female Empowerment Policy, increasing women's access to, and use of, mobile and the Internet can help reduce gender disparities in access to, control over, and

benefits from resources, wealth, opportunities, and services, and it can increase the capability of women and girls to realize their rights, determine their life outcomes, and influence decision-making.

At the same time, there is emerging evidence that digital technology can be a double-edged sword for women and girls, and there are often unintended consequences of digital technology that can threaten a woman's safety and wellbeing.

The generalization that technology solely increases economic and social opportunities is too simplistic, as technology can also be used as a tool for repression and patriarchy.

Indeed, the inventor of the Internet, Tim Berners-Lee, recently declared that the Internet was not working for women and girls,¹⁰⁷ and was not a safe space for them. This is backed up by worrying statistics: over half of young women in a global survey across 180 countries report having experienced violence online, and 87 percent of them believe the problem is getting worse (Figure 6).¹⁰⁸ Similarly, European Institute for Gender Equality (EIGE) estimates that one in ten women have already experienced a form of online violence by the age of 15.¹⁰⁹



FIGURE 6. RISKS OF TECHNOLOGY

WEB FOUNDATION, 2020

Women's and girls' (and their family's or community's) fears and concerns about the risks of mobile and the Internet for women can restrict their access and participation in technology. Fears concerning safety and harassment (among other things) are significant barriers that inhibit some women from benefiting from, or even wanting to use, mobile devices or the Internet.¹¹⁰

While the Internet in particular can be a source of information, entertainment, and empowerment, there is also a fear of the negative side: fears of being exposed to inappropriate people or content, risks to personal safety, online bullying and harassment, compromising of personal information or data, and perceptions that online relationships can damage reputations. This fear of the negative side of technology can be a barrier to access and use for women and girls, either through self-policing or through gatekeepers who restrict access because of social norms.¹¹¹

Therefore, it is extremely important to understand and mitigate the risks, and potential collateral damage, entailed in closing the gender digital divide and connecting more women and girls. This priority aligns directly with WEEGE Principle 7 (Address Gender-based Violence), and it fits into U.S. Government's strategy to reduce GBV as part of a wider agenda to empower women and girls.¹¹²

As with the barriers to technology, the risks of technology are interrelated and complex, and while an attempt has been made here to categorize them for ease of understanding, many of them could arguably fall under multiple categories.

¹⁰⁷ GSMA Connected Women, 2019.

¹⁰⁸ Web Foundation, 2020.

¹⁰⁹ EIGE, 2017.

¹¹⁰ Broadband Commission, 2018.

¹¹¹ GSMA Connected Women, 2018.

¹¹² U.S. Government, 2016.



Fears concerning safety and harassment (among other things) are significant barriers that inhibit some women from benefiting from, or even wanting to use, mobile devices or the Internet.



In the literature, there is a lack of standardized definitions and terms to refer to technology-facilitated violence and abuse towards women, or gender-based violence. Terms used include “cyber violence,” “technology-facilitated/assisted violence,” “ICT-facilitated violence,” and “online violence.” This range of terminology often results in a misunderstanding about what technology-facilitated violence and abuse is. Without comprehensive definitions, it is challenging to measure and document the lived experiences of women and girls.¹¹³

These definitions need to be made clearer for them to be mitigated effectively. A key recommendation from EIGE suggests that definitions of online violence and abuse should be updated so that they specifically refer to crimes committed against women and girls.¹¹⁴ This has now been initiated by the International Center for Research on Women (ICRW), with support from the World Bank; ICRW has developed a framework to help better understand the different contexts and types of online gender-based violence and to develop standardized measures, with a view to assisting in establishing specific regulations and policies.¹¹⁵

This document therefore uses the ICRW term, “Technology-Facilitated Gender-based Violence,” which they define as:

“action by one or more people that harms others based on their sexual or gender identity or by enforcing harmful gender norms. This action is carried out using the Internet and/or mobile technology and includes stalking, bullying, sexual harassment, defamation, hate speech and exploitation.”¹¹⁶

The term has been expanded in this document to include physical safety risks, such as a theft as a result of owning a mobile phone.

TECHNOLOGY-FACILITATED GBV

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision Making; Gender Roles, Responsibilities, and Time Use*

Technology-facilitated GBV is overwhelmingly skewed towards women and girls: 95 percent of aggressive behavior, harassment, abusive language, and denigrating images in online spaces are aimed at women and girls. The consequences of technology-facilitated GBV are not limited to digital spaces: its risks and consequences straddle both the physical world and the digital world.

RISKS IN THE PHYSICAL WORLD

Mobile phones possess real value, and in public spaces, a woman carrying a phone can put her at risk of theft and bodily harm. In fact, women’s fear of safety concerns in carrying a mobile phone appeared as a key barrier to women’s access and use of mobile in Latin America, as 40 percent of women surveyed in Mexico reported that fear of safety was the key reason for not owning a mobile.¹¹⁷ Women and girls often report leaving their mobile phone at home or avoiding using it in public to prevent theft; similarly, they may not want (or be permitted by gatekeepers) to have a higher-end handset or smartphone in case of theft.¹¹⁸ Having lower-end handsets because of theft concerns can also curtail Internet use, as women and girls using lower-end phones, or basic or feature phones, are less likely to be online.

There is also a link between physical violence and access to/ use of technology by women. Many women report that they often do not use mobile phones or the Internet at home, or that they hide them to avoid domestic violence caused by jealousy.¹¹⁹ Research in Argentina shows that a woman’s mobile phone is one of the first items to be destroyed by a violent partner.¹²⁰ Evidence in Papua New Guinea and the Solomon Islands shows links between physical GBV and women’s access to mobile and the Internet: women being online and being connected is often blamed for an increase in sexual relationships outside of marriage and subsequent conflict and physical violence between partners and families.¹²¹ Physical violence often also arises when men perceive women’s (suspected) use of mobile phones and the Internet as a way to break free from men’s control, and thus disruptive and destructive to the social order — and therefore a punishable act.

113 Womankind, 2018.

114 EIGE, 2017.

115 ICRW, 2019.

116 ICRW, 2018.

117 GSMA Connected Women, 2015.

118 Girl Effect, 2018; GSMA Connected Women, 2018.

119 GSMA Connected Women 2018.

120 Association for Progressive Communications, 2010.

121 Hobbs, 2018.

RISKS IN THE DIGITAL WORLD

Using the Internet leads to an increased risk of online sexual harassment and abuse for women and girls. A study by Amnesty International revealed that nearly 25 percent of women across Europe and the United States had experienced online abuse or harassment at least once, and 41 percent of that group reported that these experiences made them feel that their physical safety was threatened.¹²² This is common in developing countries too: 89 percent of women surveyed in Zimbabwe, Nepal, and Kenya said they had witnessed situations of other women being victims of online violence and abuse, and 50 percent had also been a victim of online violence and abuse themselves.¹²³ Social media in particular is an unsafe space: 68 percent of reported online abuse of women and girls takes place on social media platforms.¹²⁴

Reported harassment through technology is not just online, but on mobile phones too: 36 percent of women in India reported that they have received calls or messages of a sexual or inappropriate nature, and 82 percent also said that they have received unwanted pictures or videos of a sexual or inappropriate nature.¹²⁵

There is also an increasing number of websites that are dedicated to sharing revenge pornography, with users submitting images of victims (without their consent) accompanied by their personal information. Research indicates that 90 percent of victims are female, and there have been multiple cases of suicide among women because of this revenge porn.¹²⁶

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¹²² Amnesty International, 2017.

¹²³ Womankind, 2018.

¹²⁴ Web Foundation, 2020.

¹²⁵ GSMA Connected Women, 2015.

¹²⁶ EIGE, 2017

This acts as a major deterrent in using the Internet for younger women in particular: in the 2020 Web Foundation survey, 35 percent of young women reported that the online sharing of private, intimate images and video without their consent was their top concern about using the Internet, and female respondents were much more concerned about this than men.¹²⁷ Similarly, teenage girls in Brazil reported widespread sharing of their nude photos by teenage boys without permission, and this has had extreme consequences, such as suicide attempts.¹²⁸

Cyberbullying is also much more acute for women and girls. In Uganda, 45 percent of women surveyed reported that they experienced direct bullying or threatening behavior when using the Internet.¹²⁹ Similarly, more than half of female respondents surveyed in India reported that they had experienced some kind of online bullying, trolling, or aggression.¹³⁰ Victims of cyberbullying are from a wide range of populations and contexts: female politicians and publicly elected officials in Kenya and Zimbabwe regularly experience far more cyberbullying attacks than their male counterparts, receiving hate speech or comments about their sexuality and appearance.¹³¹ In Africa, female activists are much more likely to be trolled online, more than male activists or female activists from other regions.¹³²

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the internet.

| CYBERSECURITY AND DATA PRIVACY

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision Making; Gender Roles, Responsibilities, and Time Use*

Another risk of bringing more women and girls online are the attendant security and privacy risks, related to cybersecurity as well as data privacy and data security.

The [USAID Digital Strategy](#) specifically mentions cybersecurity and data privacy as a core concern and as an area to tackle within the digital ecosystem more broadly. While cyberattacks, data risks, and privacy breaches — such as sharing of personally identifiable or sensitive information — impact both genders, women and girls tend to be more vulnerable. This is because they tend to have lower levels of digital literacy skills, and so are less aware of risks and risk mitigation strategies.¹³³

Indeed, the After Access studies in Africa revealed that, compared to men, women are far less aware of the cybersecurity or privacy threats that may exist, and how to safeguard themselves.¹³⁴

¹²⁷ Web Foundation, 2020.

¹²⁸ EQUALS, 2019.

¹²⁹ WOUGNET, 2019.

¹³⁰ Pasricha, 2016.

¹³¹ Womankind, 2018.

¹³² Quartz, 2019.

¹³³ World Bank, 2018.

¹³⁴ After Access, 2018.



Photo: KC Nwakalor/USAID/Digital Development Communications

This disparity is related to individual perceptions of what privacy is. In some countries, women who are less digitally literate often regard privacy as a “social” thing, rather than a “tech” or “data” thing. When women in Bangladesh, Pakistan, and India talked about maintaining online privacy on their mobile, they focused on keeping their online (or mobile) activities private or secret from other people in their household or community (i.e., through content hiding or deletion, or using phone locks), rather than on data privacy, cybersecurity, or privacy risks from other online actors.¹³⁵

Personal data breaches and data privacy risks can also be more acute for women and girls. As companies collect more personal and financial data from consumers, many of these companies violate privacy rights and data security. Evidence shows that women and girls are more likely to be on the receiving end of these violations, as female consumers tend to be less aware of the risks and of their rights.¹³⁶ There is also an increased risk of data breaches for women as more identification systems shift to digital. While digital identification is often presented as a way of facilitating access to government services and a way to confirm and protect your identity, it can also be used as a tool for control and surveillance by the state or by other actors. And in countries with strong gender norms and patriarchal structures, it can be used to control women and limit their agency.¹³⁷

¹³⁵ Sambasivan et al., 2018.

¹³⁶ GenderIT, 2019.

¹³⁷ Privacy International, 2018.

REINFORCING GENDER STEREOTYPES AND INEQUALITIES

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision Making; Gender Roles, Responsibilities, and Time Use*

Increasing mobile and Internet access and use among women and girls can also lead to the unintended consequences of reinforcing gender stereotypes or exacerbating existing gender inequalities. In some patriarchal societies — where women’s mobile phone or Internet access and use may be associated with assumptions about a woman’s freedom to make her own choices or to form relationships — this may upend traditional household control and power dynamics and expectations. While we have seen that this can in some cases result in giving women agency and control, it can also be a negative thing, as it can reveal tensions within a household or community and result in reinforced gender-based restrictions or male dominance.

For example, in some households or communities, particularly those with strong gender-based norms, it is common for women’s mobile and Internet usage to be controlled by men. Often men in these societies believe that technology has a corrupting influence on women. In many South Asian countries, it is an expected cultural norm that women share their devices with their husbands and families, and it is also considered acceptable behavior for husbands to monitor their wives’ online activity.¹³⁸ This is often more acute for young women and girls, especially those who are unmarried: parents use mobile technology to control or track a daughter’s movements much more than they would a son’s, reinforcing gender norms about what is safe and acceptable for girls compared to boys.¹³⁹

This form of social control of women’s movements can be done through simple voice calls and text messages, or through apps such as Phone Tracker or Find My Friends which reveal the location of a user.

This puts women and girls at a disadvantage, not only because of parents and male family members exerting control, but also because of the risks of physical or sexual violence if someone can track their movements.

Women’s use of social media is often seen as a threat to relationships and control, and it can lead to reinforcing unequal power relations between men and women. In the After Access surveys from Africa, women reported that their male partners did not allow them to be on Facebook. Women also reported that their male partners felt uncomfortable with them being on social media sites, due to jealousy or fears that they would be unfaithful; some women reported that they were afraid of being online because of their husbands’ responses, with increased tension within the household as a result of their being online.¹⁴⁰

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¹³⁸ Tacchi, 2014; Sambasivan et al., 2018.

¹³⁹ EQUALS, 2019.

¹⁴⁰ After Access, 2018.

Similar patterns of male control have also been reported in a South Asian study on privacy. Many women in Pakistan, Bangladesh, and India report that they depend on their husband, father, or brothers for access to the Internet and technology, both because of social norms around control but also because of lack of digital literacy skills.¹⁴¹ For example, their husbands create Facebook accounts for them, as the women report not knowing how to create one or create a profile; every time the female user wants to log into her account, she needs her husband to log in for her.

Social media is often used as a tool to support social norms of male dominance in some societies. Although Facebook promotes itself as a platform to provide a voice for everyone — and in many ways this is true — in many countries it perpetuates gender inequalities and reinforces social norms by marginalizing women. In Pakistan, many young male Facebook users report having two Facebook accounts: one for their male friends and one for their family; this is done to avoid their male friends seeing their female relatives in photos, which would compromise their female relatives' honor and their family's reputation. This approach reinforces the social norm that women need to be protected and hidden from society and males, in what Schoemaker calls “digital purdah”¹⁴² — keeping women and girls confined to the private space, thus reducing their agency.

A study in Ghana and India¹⁴³ revealed similar practices among young women, who reported having two Facebook profiles to hide what they were doing online from their families, as they were very conscious of what is and is not acceptable for young women in society's eyes (something that the male respondents did not mention). Young women and girls are much more aware of, and exposed to, criticism for what they do online (e.g., having an open profile, too many friends, too many male friends, or revealing photos); this in turn leads to self-monitoring and self-surveillance.¹⁴⁴



Interestingly, many of these gender norms and unequal power relations that technology can reinforce are internalized by women and girls themselves, in a form of digital “double consciousness.” Female respondents in South Asia viewed it as completely acceptable for their male relatives to monitor their devices and their Internet usage. While a few take furtive steps to hide their browsing history, or put locks on their phones, the majority believed this oversight was appropriate. Some even reported that they appreciated it when male members checked their phones, to ward off unwanted calls and attention on social media, as these women view their own digital literacy skills and capabilities as lower than their male relatives'.¹⁴⁵ Adolescent girls often report they believe that phones and the Internet can be unsafe spaces for them; they think that since they cannot be trusted with access, they shouldn't have it.¹⁴⁶ Younger women and girls are especially exposed to the online “beauty myths” and feminine ideals, entailing pressure to conform online to gender norms of physical appearance, reputation, and respectability,¹⁴⁷ which they often internalize.

¹⁴¹ Sambasivan et al., 2018.

¹⁴² Schoemaker, 2015.

¹⁴³ DAI, 2020 (unpublished; personal communication).

¹⁴⁴ EIGE, 2019.

¹⁴⁵ Sambasivan et al., 2018.

¹⁴⁶ Girl Effect, 2018.

¹⁴⁷ EIGE, 2019.



This result of silencing women is not only a violation of their right to freedom of expression; it also undoes all the benefits of technology access and use.

WHY DO THESE RISKS MATTER?

These negative impacts of technology on women and girls can reduce or restrict the way they use mobile phones or the Internet, leading to changes in their digital behavior which can negate the positive benefits that technology can bring. Women and girls increasingly report that the risks associated with mobile and the Internet are both a major barrier to access and a deterrent to further usage. This is not only because of their own concerns, but also in response to those of their parents, spouses, or male gatekeepers; many women and girls report that they don't own a phone or are not online because their (male) relatives are worried about their safety.

These risks also limit and restrict women's and girls' usage and participation with mobiles and the Internet. Intimidation, harassment, and concerns about risks can lead to the (self) censorship of personal information that women and girls share online or can force them to stop participating online altogether. Women often report reduced or restricted usage: for example, self-policing of Internet use (or being monitored by male gatekeepers), which results in limited usage, or reducing their use of social media due to fear of harassment or other online safety concerns.¹⁴⁸

A survey in Zimbabwe, Nepal, and Kenya found that 71 percent of female respondents reported that online abuse and violence influence their use and participation on social media sites. Impacts included being less willing to engage in public discourse and to voice their opinions, withdrawing from specific conversations, self-censoring their response, or withdrawing from the Internet or social media altogether.¹⁴⁹

This result of silencing women is not only a violation of their right to freedom of expression; it also undoes all the benefits of technology access and use. These negative digital experiences — which are disproportionately skewed towards women and girls — also have a negative impact on women's and girls' well-being. Fully 59 percent of young women who experienced online abuse say it has affected their emotional and/or physical wellbeing (Figure 7) — that it affects their relationships, reduces their confidence in using the Internet, and makes them feel that they are less capable than others and less likely to achieve their ambitions.¹⁵⁰

One aspect of the issue is that women and girls often do not know what to do when faced with the risks. Women and girls often have lower digital literacy skills and lower levels of confidence, which makes them more vulnerable to the risks than men and boys; they also often have little information about staying safe online or who to turn to.

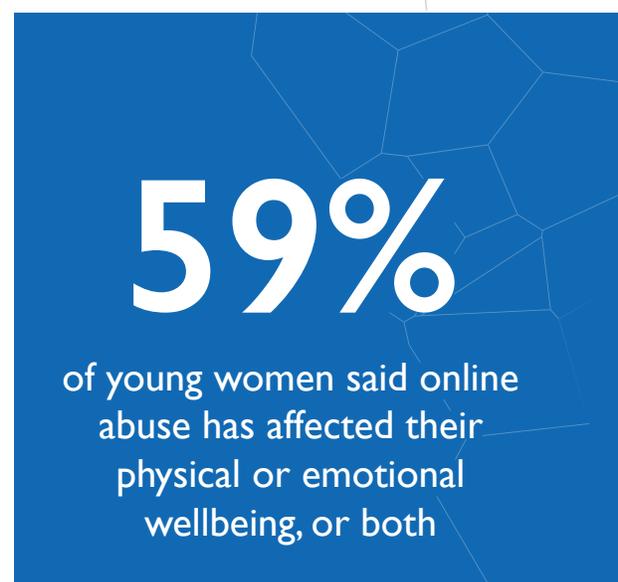


FIGURE 7. THE EFFECT OF TECHNOLOGY-FACILITATED GBV

WEB FOUNDATION, 2020

¹⁴⁸ GSMA, 2018.

¹⁴⁹ Womankind, 2018.

¹⁵⁰ Web Foundation, 2020.

The After Access studies in Africa revealed that many women did not know how to block phone numbers; many female users resort to changing their own phone numbers, after receiving sexual advances from a stranger.¹⁵¹ Similarly, girls often report that they do not know how to proceed or where to turn for help when faced with online harassment or non-consensual sharing of nude photos.¹⁵² One study of eight countries in Africa and Asia found that 25 percent of women who are harassed online or via mobile do nothing about it, citing reasons such as “it’s not worth reporting,” “it happens all the time,” and “authorities don’t care.”¹⁵³ Similarly, 56 percent of Palestinian women and girls who had experienced technology-facilitated GBV do not consider the Palestinian police or legal system to be trustworthy, stating that such issues are dealt with in much the same way as other with gender-based issues — through family support rather than through legal remedies.¹⁵⁴

This lack of confidence in legal systems is staggering. There is currently a notable lack of formalized policies or regulations around technology-facilitated GBV. Despite its increasing prominence, technology-facilitated GBV still has no formalized regulations in the EU,¹⁵⁵ and in general the response from many governments, law enforcement authorities, and social media companies has been insufficient. In some countries, like Kenya, there are legal frameworks for online safeguarding and security, but they are often generic and gender-blind.¹⁵⁶ Indeed, in 74 percent of countries included in the World Wide Web Foundation’s Web Index, law enforcement agencies and the courts are failing to take appropriate actions in situations of technology-facilitated GBV;¹⁵⁷ very few perpetrators are held accountable for their actions, because of the limited ability to prosecute offenders due to the lack of clear regulations.¹⁵⁸

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Photo: Jack Gordon/USAID/Digital Development Communications

¹⁵¹ After Access, 2018.

¹⁵² EQUALS, 2019.

¹⁵³ Web Foundation, 2015.

¹⁵⁴ Kvinna till Kvinna, 2018.

¹⁵⁵ EIGE, 2019.

¹⁵⁶ Web Foundation, 2015.

¹⁵⁷ Web Foundation, 2015.

¹⁵⁸ Broadband Commission, 2015.



Photo: pixelfusion3d/Getty Images/Stock

WHAT ARE SOME MITIGATION MEASURES THAT USAID CAN TAKE AT STRATEGY, PROJECT, AND ACTIVITY LEVELS?

A commonly cited reason for development practitioners and partners not to include the use of digital technology for women and girls in their projects, or to avoid working to close the gender digital divide at the activity level, is the potential risks. Despite the clear benefits, often planners are concerned about the negative consequences, tending to shy away from integrating digital technology into their activities targeting women and girls.

However, there are several different ways to mitigate these risks and consequences, so that more women and girls increasingly use mobile and the Internet rather than reduce their usage, to ensure that the gender digital divide continues to close.

Mitigating the risks is particularly important as it directly corresponds to WEEGE Principle 7 (*Address Gender-based Violence*). The suggested strategies have also been mapped to other relevant WEEGE Principles, as indicated below.



UNDERSTAND THE CONTEXT AND THE RISKS: “FIRST, DO NO HARM”

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision Making; Gender Roles, Responsibilities, and Time Use*
- » *WEEGE Principles: 1 (Understand the System); 3 (Be Specific); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*

In all technological interventions, it is crucial to understand the market and the cultural context. Being aware not only of the current status of women’s and girls’ access to, and use of, mobile and the Internet in a country or region can help us understand what needs to be done, what issues women and girls face, and how these issues will affect strategies, projects, or activities. It is particularly important to understand the social and cultural dynamics of technology access for women, and the risks of inadvertently promoting negative effects such as technology-facilitated GBV or increasing male dominance, to make sure all USAID programming takes the approach, “first, do no harm.”

This approach requires conducting preliminary research with potential beneficiaries — both male and female — ahead of launching any services or initiatives. At a minimum, this research needs to understand such realities as: (familial, local, and national) power structures and community dynamics; social, cultural, and gender norms and roles within the community; who the power brokers are; and what transitional moments there may be, when women have more (or less) influence.¹⁵⁹

Uncover core issues and fears about women’s technology use in the community – what is the root cause of the issue? Has the community effectively addressed other gendered concerns such as child marriage, girls’ education, or other gender inequities? Can these approaches be applied? Work with women to understand not only their information needs, but their aspirations for themselves, their children, and their communities. These are effective entry points for digital inclusion efforts.

This could be done through a gender analysis done at the strategy, project, and activity levels, that integrates WEEGE based on [ADS 205](#) and that includes questions about the gender digital divide.

This research can leverage existing tools such as [USAID’s Gender and ICT Survey Toolkit](#) or [GSMA Connected Women’s Women and Internet Research Toolkit](#), which include questions on behavioral themes such as control, ownership, and perceptions. It can help USAID Mission staff and partners better understand how women and girls may be positively or negatively impacted by strategies, projects, or activities, and so to help plan for mitigation from the very beginning.

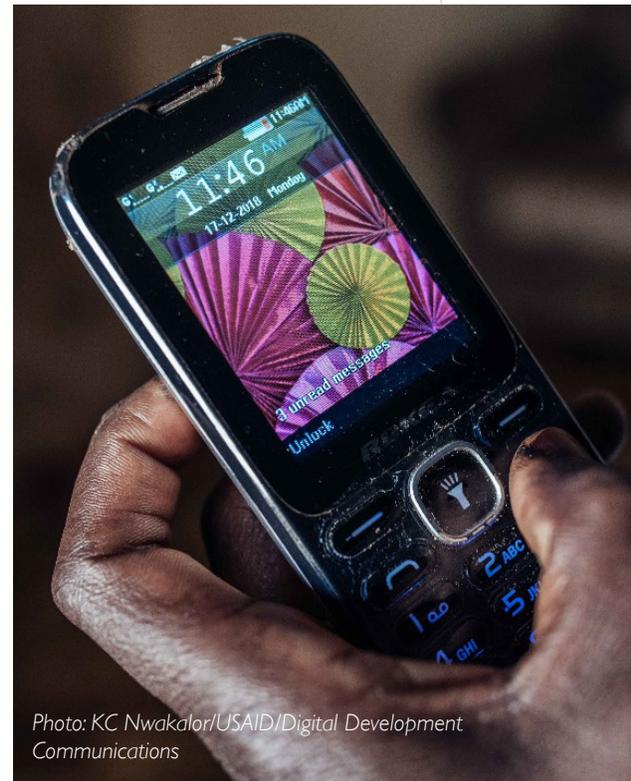


Photo: KC Nwakalor/USAID/Digital Development Communications

¹⁵⁹ Ideo, 2019.



SUPPORT EDUCATION AND DIGITAL LITERACY TRAINING

Women and girls are more vulnerable to risks not only because they have lower levels of digital literacy and confidence, but also because they often do not know what to do when negative things happen. Education and digital literacy are crucial to help women and girls (and their networks) use mobile and Internet safely and protect themselves from the risks. Some strategies that USAID can undertake include the following.

EDUCATE AND TRAIN WOMEN AND GIRLS ON DIGITAL LITERACY, AND PARTNER WITH OTHERS

- » *ADS 205 Domains: Access and Control*
- » *WEEGE Principles: 5 (Collaborate); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*
- Support mobile and digital skills training initiatives for women and girls, to make them more comfortable with technology and better equipped to deal with risks. This may be both formal and non-formal; it may involve public and private partnerships to ensure maximum outreach and to avoid duplicating efforts.
- Collaborate with the private sector to support their existing digital literacy training for women and girls in emerging markets, particularly addressing the risks of technology and how they can protect themselves. These include organizations like: Mozilla Foundation, which is working on web capability and digital literacy skill training; the mobile operator group Orange, who have partnered with GIZ and local universities to establish digital hubs in Africa and the Middle East, offering young people free training in digital skills, including in safety and security risks; and the mobile operator Idea in India, which provides step-by-step digital literacy lessons via IVR (voice) to teach women how to access and use the Internet through their phones.
- Work with national governments to include mobile and digital skill training in formal school curricula, including in primary schools, to ensure that girls are reached while they are still in school. It is crucial to look downstream and reach girls from an early age.¹⁶⁰
- Ensure that any digital literacy training is relevant to the devices and platforms that women and girls use. For example, if women and girls in a community only go online via mobile, it does not make much sense to deliver training that is focused mainly on computers.

Women and girls are more vulnerable to risks not only because they have lower levels of digital literacy and confidence, but also because they often do not know what to do when negative things happen.

¹⁶⁰ Plan, 2018.

INCORPORATE RISKS AND MITIGATION STRATEGIES INTO ANY DIGITAL LITERACY TRAINING

- » *ADS 205 Domains: Access and Control*
- » *WEEGE Principles: 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*
- Ensure that any digital literacy training delivered to women and girls includes modules or sections on how to use mobile devices and the Internet safely, including practical advice on how to protect against potential threats.
- Ensure that the training includes in-country information such as: the helplines or organizations where women and girls can get help or advice if needed; any legal frameworks that protect users; and where to report any issues.

SUPPORT DIGITAL LITERACY AND RISK TRAINING FOR WOMEN AND GIRLS' FAMILIES AND WIDER NETWORKS

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision Making*
- » *WEEGE Principles: 2 (Amplify Women's Voices); 4 (Engage With Men And Boys); 5 (Collaborate); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*
- Educate the participants' children — both sons and daughters — on the risks of technology and how to mitigate these risks and where to turn to for help. Often, a woman's children can be a source of knowledge and guidance for her in using mobile or the Internet; they are often better educated and have a willingness to experiment with technology,¹⁶¹ and so can help teach mothers. Children can also act as change agents vis-à-vis fathers and other male gatekeepers, relatives, or the wider community; if children are able to teach others about what the

risks are, and how women and girls can stay safe online, this can help overcome some of the social norms and fears around the gendered use of the Internet.

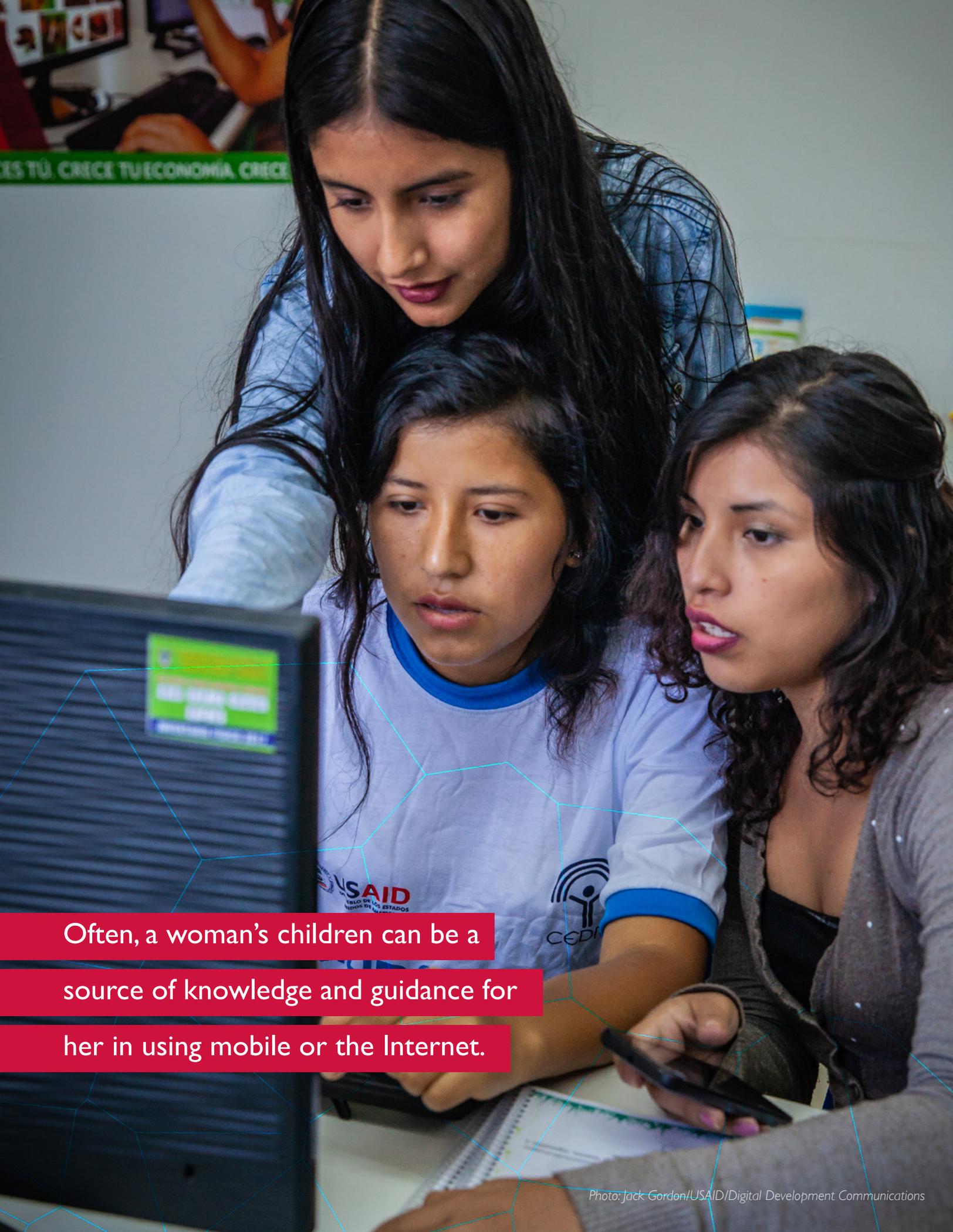
- Train others within girls' wider networks — parents, brothers, guardians, teachers, and caretakers — on what the risks are and how their daughters and sisters (etc.) can stay safe online, including how to get help. Save the Children's Connected and Safe program in the Balkans delivers training for teachers and parents (in consultation with children) on staying safe online; it also works with community members to train them for signs of risks or technology-facilitated GBV (particularly sexual harassment and abuse), so they can then model safe use of the Internet to children, especially girls.¹⁶²
- Work with partners to train influential people in the community, such as local government officials, on digital literacy and risks, to help overcome any trust issues around mobile or the Internet.¹⁶³ If women and girls (or their male gatekeepers) see these influencers using technology safely, and mitigating the risks, over time this demonstration effect may encourage others to use technology, allowing male gatekeepers to overcome their concerns about the risks to women and girls. This is particularly likely if the influencers are female.

Train others within girls' wider networks — parents, brothers, guardians, teachers, and caretakers — on what the risks are and how their daughters and sisters (etc.) can stay safe online, including how to get help.

¹⁶¹ Ibtasam et al., 2019.

¹⁶² ICT4D Webinar Series, 2020.

¹⁶³ World Bank, 2018.



Often, a woman's children can be a source of knowledge and guidance for her in using mobile or the Internet.

USE OR ADAPT EXISTING MATERIALS AND TOOLKITS

» *ADS 205 Domains: Access and Control;*

» *WEEGE Principles: 5 (Collaborate); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*

There are many digital literacy training materials available that have already been developed, tested, and used with women and girls in emerging markets. Rather than reinventing the wheel (which takes time and resources), USAID staff can promote the use and adaptation of these existing materials and curricula. Many of these are in multiple languages, and all of them can be adapted and contextualized. There is also an option of repurposing the content so that it is available on the mobile platforms (e.g., IVR) that are more likely to reach women — not just through online platforms.

USAID can support adaptation of these tools and resources to be suitable for women and girls in low-income contexts and with lower levels of literacy or differing levels of access. For example, the tools can be made available in local languages or in a more visual format; they can be re-designed for mobile Internet access only, or to be read on smaller mobile screens, or as mobile-only versions that deliver the courses through IVR. USAID can also support adaptation of these tools to be tailored specifically for training and awareness for (male) gatekeepers, to overcome social norms and fears of what might happen if their female relatives go online.

- The [GSMA Mobile Internet Skills Training Toolkit](#) has been designed for mobile-first contexts, and it includes a section on navigating risks. It has also successfully been adapted to be used with women and girls: for example, by SHEVA, Tigo, and EduMe in Guatemala, to deliver Internet skills training to women and girls via their mobile phones.¹⁶⁴
- There are also many materials and toolkits that specifically address online and mobile safety and security risks for women and girls. These include: [Chayn's Do-It-Yourself Online Safety Guide](#); [Take Back The Tech's guide on identifying online abuse](#); [InterNews' Safe Sisters](#)

If more women and girls are using technology, we should also be investing in technology and services that work for women and girls to help overcome the risks.



Photo: USAID Afghanistan

¹⁶⁴ EduMe, 2019.

[Toolkit](#); [CyberSmile Foundation's Help Center](#); [Access Now's Digital Security Helpline](#); and [VPNmentor's Empowering Internet Safety Guide for Women](#).

- For organizations, individuals, or activists who want to become involved in mitigating risks, the [Fix The Glitch toolkit](#) has practical advice on mitigation strategies and how to raise awareness.

INVEST, SUPPORT, AND SHARE INSIGHTS ON DIGITAL PRODUCTS AND SERVICES THAT MITIGATE RISKS

If more women and girls are using technology, we should also be investing in technology and services that work for women and girls to help overcome the risks, designing them with a gender and safety or risk lens. We should also be sharing the insights from these initiatives to the wider Gender and ICT community, to build the evidence base of what works and what does not, what can be scaled and replicated. Some of the initiatives USAID can support to make it safer for women and girls to access and use technology include the following:

PRODUCTS AND SERVICES THAT HELP USERS SHARE, REPORT, AND GET RECOURSE

- » *ADS 205 Domains: Access and Control; Power and Decision Making*
- » *WEEGE Principles: 2 (Amplify Women's Voices); 5 (Collaborate); 6 (Establish the Evidence); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*

There are several digital products which allow users to track and report technology-facilitated GBV crimes, helping to prosecute perpetrators more effectively and strengthening the confidence in the legal system, both at the individual level and more broadly.

- [HarassMap](#) is an app developed in Egypt (and now rolled out in other countries, such as Afghanistan and India) to help female users track incidents of cyberviolence, and to encourage more positive action and responses to such crimes. It allows victims to record the type of cybercrime committed, the date, and the exact location. It also allows other users to report incidents, promoting positive action within societies while establishing a support service or network for victims.¹⁶⁵
- Other examples include [HarassTracker](#) in Lebanon, [Ramallah Street Watch](#) in Palestine, and [Bijoya](#) in Bangladesh.

There are also services that allow female users to share and report their own experiences, crowdsourcing information and putting control into the hands of users.

- In India, [Safetipin](#) is an app that uses crowdsourced information from women and girls to map areas in cities to create safety audits (parameters that together contribute to the perception of safety). This allows other female users to know how safe they might feel in a place after dark. The app also has a function to alert friends or family if something unusual happens, thus increasing the user's sense of personal safety.
- Other examples include [Safe City](#) in India, the global [Watch Over Me](#) app, and Plan's [Free to Be](#), targeted to adolescent girls.



¹⁶⁵ GSMA Connected Women, 2018.



BOX 5. POWER DYNAMICS AND PERSONAL PRIVACY SOLUTIONS: “FIRST, DO NO HARM”

Password or biometric locks on phones and apps, and designing discreet apps or services, do indeed offer discretion to female users. However, there is also a risk that women and girls may be perceived by gatekeepers to be hiding things or having secrets. This can in some cases put the female user at more risk of gender-based restrictions or even physical violence and can also add an extra burden of keeping secrets.

Any project or activity that takes this approach should always fully understand the cultural context and power dynamics involved, and what potential additional harm this approach could bring, before starting any work.

It should also always be implemented in conjunction with engaging with gatekeepers (male relatives) to get their buy-in, and should be designed with female users’ input to make sure it fully meets their needs and does not put them at any additional risk.

PRODUCTS AND SERVICES THAT PROTECT WOMEN AND GIRLS’ PERSONAL PRIVACY FROM OUTSIDE MONITORING

- » *ADS 205 Domains: Access and Control; Power and Decision Making; Cultural Norms and Beliefs*
- » *WEEGE Principles: 2 (Amplify Women’s Voices); 5 (Collaborate); 6 (Establish the Evidence); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*

Several digital products and services are specifically designed for women and girls to protect their personal privacy if their use is being monitored.

Some activities use biometrics for locking phones, to allow only the female users to unlock them and not their husbands, fathers, or other male gatekeepers who may want to monitor what they are doing. Some examples include:

- [Orange Egypt’s Private Recharge](#) allows users to recharge their phone credit anonymously, in stores or online. This can mitigate the issue of male shop vendors or bystanders recording their phone numbers and then contacting them without permission.
- [Vodafone India Sakhi service allows female customers to generate a personal PIN which they can use to top up their phone, without disclosing their personal phone number.](#)
- [Truecaller](#) is a call-blocking app that blocks unwanted calls and texts, helping reduce the amount of unsolicited and harassing calls and texts that women and girls receive. Fifty percent of their user base is in India. Truecaller is available in multiple languages and is designed for users with low digital literacy, making it particularly appropriate for women and girls.

- Plan International leverages digital platforms such as Facebook and Instagram to build safe private networks and to interact with young girls on the platforms they already access. Their [Girls Out Loud](#) initiative provides safe private online spaces for girls, moderated by Plan staff, to discuss key gender issues such as self-image, self-confidence, and health. Plan is mitigating the risks to female users by using private online platforms and creating safe spaces for private engagement, as there is much more risk for female users if content and groups are public.

PRODUCTS AND SERVICES THAT ARE RESPONSIBLE AND TRANSPARENT WITH DATA PRIVACY AND SECURITY

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs*
- » *WEEGE Principles: 2 (Amplify Women's Voices); 5 (Collaborate); 6 (Establish The Evidence); 7 (Address Gender-based Violence); 9 (Walk The Talk); 10 (Embrace Emerging Innovations)*

Many digital products and services put users at risk by not safeguarding their personal information or data; this is particularly acute for women and girls, who have lower levels of digital literacy and knowledge about the risks, and so are less able to understand (or consent to) what they are signing up for. Some other products and services do put women's and girls' data privacy and security front and center.

- Girl Effect has created [principles and guidelines](#) on digital platforms; they ensure that all of their digital products (including [Springster](#) and the [Big Sis](#) chatbot) abide by these principles.
- Plan's [Girls Out Loud](#) digital safe spaces initiative has a social listening dashboard which analyses discussions girls are having using AI. This allows Plan to pull insights from the data to use in their own data and research design. Plan is transparent with users about how their personal data is used and has developed user-friendly terms and conditions and privacy policies to help female users understand what they are signing up for, to enable informed consent.¹⁶⁶
- The EveryDay Sexism Project, which encourages women and girls to report experiences of sexism, provides [guidelines on digital security](#) and keeping personal information and data private, made available when women and girls report their experiences online.

PRODUCTS AND SERVICES THAT ARE DESIGNED WITH AND FOR WOMEN AND GIRLS (AND THEIR REALITIES)

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs*
- » *WEEGE Principles: 2 (Amplify Women's Voices); 4 (Engage Men And Boys); 5 (Collaborate); 6 (Establish The Evidence); 7 (Address Gender-based Violence); 8 (Partner With Women); 9 (Walk The Talk); 10 (Embrace Emerging Innovations)*

Best practice in gendertech means involving female users and co-creating with them. Putting women and girls front and center in the design process is crucial to bringing more women and girls into the digital economy and closing the gender digital divide, as one of the barriers to access and use is the lack of products and services designed for female user needs. This is especially crucial for addressing potential risks. Technology has the potential to increase the level of regimenting, monitoring, and controlling women, so that anyone involved in creating a product or service must keep a gender

¹⁶⁶ ICT4D Webinar Series, 2020.

lens, with an understanding of the tension between potential positive and negative effects. Any product or service that USAID supports must be designed for women and girls while constantly seeking their feedback, incorporating awareness of their realities, their gatekeepers, and their institutions in both design and roll-out.¹⁶⁷ When consulted, women and girls regularly say that they want safer online experiences: any product or service needs to work with women and girls to ensure they are (1) user-friendly and engaging, and (2) have the safety and privacy features that users want — and that are intuitive. This will allow women and girls to use the service freely and minimize their own (or their male gatekeepers') doubts about their online safety.

- Conduct formative research with potential female users to understand about their lives — both online and offline — as well as what digital platforms they currently access (or not).
- Run human-centered design and co-creation activities with potential female users to get their ideas and learn what features they would like to see in a digital product.
- Involve women and girls in every step of the process, including content creation. For example, in Sri Lanka, Save the Children have been working with girls to co-create digital literacy and risk messages that are delivered in a way that resonates with young girls.¹⁶⁸
- Test the product with female users as often as possible to get their feedback; iterating regularly to make sure it suits their needs and is the right fit.
- Get regular feedback from female users, even after the service is live, to make sure the feedback loops and channels are always open and that female users' opinions are solicited.
- Follow best practices in designing with and for women and girls to ensure that there are no unforeseen negative consequences. Some useful resources for practical advice on co-creation include the [GSMA mHealth Gender Toolkit](#), [Girl Effect blog on best practices](#), and the [Panoply Digital blog](#) on how to do user testing for women and girls.

Save the Children has been working with girls to co-create digital literacy and risk messages that are delivered in a way that resonates with young girls.



¹⁶⁷ Ideo, 2019; Ibtasam et al., 2019.

¹⁶⁸ ICT4D Webinar Series, 2020.

- Support products and services created by organizations that have gender diversity in their core team (for example, female leaders, developers, designers, product managers), or funding female-led start-ups.
- Support initiatives and activities that actively promote women and girls, not just as users of technology, but as students, creators, and employees of technology or within STEM fields. For example, working with organizations that address the underrepresentation of women and girls as innovators and leaders through mentorship, role models, or supporting innovation and co-design challenges specifically for women and girls.

PRODUCTS AND SERVICES THAT TRAIN LAW ENFORCEMENT AND THE COMMUNITY

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Laws and Policies*

» *WEEGE Principles: 2 (Amplify Women's Voices); 5 (Collaborate); 6 (Establish the Evidence); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*

Often, there is a lack of clear policies and regulation to address technology-facilitated GBV. This leads to a lack of trust in law enforcement (and adults in general), who are not equipped to deal with and manage these situations. This in turn leads to under-reporting and a lack of recourse mechanisms for women and girls. Several digital products and services specifically address this issue.

- In Kenya, one in three girls experience sexual violence before the age of 18, but it is rarely reported due to lack of faith in the police and the criminal justice system. Equality Effect, a mobile app, trains police officers on the best practices for investigating abuse (including online sexual abuse), to keep law enforcement accountable and educated.
- Ericsson is working with the World Childhood Foundation to develop the [Stewards of Children Prevention Toolkit](#), a training app that equips adults — caretakers, teachers, parents — with the skills and resources necessary to recognize, prevent, and respond to the online sexual abuse of girls.
- In India, the [Mobilise!](#) App supports government health workers and other community leaders with standardized guidelines, protocols, and job aids on how to respond to instances of GBV in their communities. It also helps users link victims to law enforcement agencies.

EQUALITY EFFECT
is a mobile app that trains police officers on the best practices for investigating abuse (including online sexual abuse), to keep law enforcement accountable and educated.



Photo: pixelfusion3d/Getty Images/Stock

SUPPORT INITIATIVES THAT INVOLVE (MALE AND FAMILY) GATEKEEPERS

Men and other family members are often the decision-makers on whether women and girls use technology and have a crucial role in shaping overall perceptions and behaviors, including awareness and mitigation of risks. Many information sources in low- and middle-income countries — technology experts, community leaders, news broadcasters — are men;¹⁶⁹ if these influencers do not buy into the benefits of technology and the Internet for women and girls, they may actually amplify the risks or block access. By including these groups and marketing to them as well as to the intended female beneficiaries, programs can address the gendered barriers to technology access and use and help mitigate the risks.



SUPPORT (DIGITAL LITERACY) TRAINING FOR MEN AND OTHER GATEKEEPERS

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs*
- » *WEEGE Principles: 4 (Engage Men and Boys); 5 (Collaborate); 7 (Address Gender-based Violence); 10 (Embrace Emerging Innovations)*
- Include men in digital literacy training, including awareness of what the risks are, how they (as well as their wives or daughters) can stay safe online, and how risks can be mitigated. Such training can help overcome barriers by empowering men and helping them feel included.
- Frame training as helping men take an active role in navigating, preventing risks, and “protecting” their female relatives to help reduce men’s concerns about women and girls going online. If they see that the Internet is not as “dangerous” as they perhaps believed, and that there are protections in place for their female relatives, they may start to feel more relaxed about women and girls using technology. This may lessen men’s belief that they need to control what women do online.
- Train influential men in the community, which can have a ripple effect. Because people tend to trust things through word of mouth, the other men in the community may start to relax their concerns, and therefore their control, once they see other men’s positive experiences and changing attitudes.

¹⁶⁹ Ibtasam et al., 2019.

ENGAGE WITH GATEKEEPERS AS WELL AS WOMEN AND HIGHLIGHT BENEFITS AS WELL AS RISKS

» *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs*

» *WEEGE Principles: 3 (Amplify Women's Voices); 4 (Engage Men And Boys); 5 (Collaborate); 7 (Address Gender-based Violence); 8 (Partner With Women); 10 (Embrace Emerging Innovations)*

- Support marketing campaigns that specifically target men and gatekeepers, and that highlight how women's and girls' use of technology and the Internet can produce tangible benefits that outweigh the risks. For example, campaigns can highlight specific benefits to the household, such as income for women through online freelancing, which can help to counteract exaggerated safety concerns or objections.
- Promote all services and trainings to men and families rather than only to women, and recognize men as playing an active role in their family's future. This type of engagement can have a big impact on male (and female) uptake of any training or service. For example, in Bangladesh, far fewer women than men own a mobile phone or access the Internet, often because of social norms and safety concerns. In order for their mHealth service to reach their intended audience of mothers, [Aponjon \(MAMA\)](#) marketed to male household members who were the decision-makers, in order to gain buy-in from husbands to allow their wives to access and pay for the content. They did this through targeted advertising for the whole family and not just to mothers, as well as by training community health workers who worked with fathers as well as mothers.
- Develop products and services that can obviously benefit men as well as women. For example, in India, women's level of access and use of mobile and the Internet is much lower than men's, largely because of social norms: many Indian men don't believe that their wives or daughters should have their own mobile phones, often due to safety concerns. The mobile operator Telenor addressed these gendered norms by selling two paired SIMs with special tariff plans, one to be used by a woman and the other by a male household member. The aim was to reduce cultural barriers, encouraging men to see the value of women having a mobile phone and creating incentives for the men as well. This resulted in a huge uptake in female mobile users: 33 percent of the female customers were first time SIM owners.¹⁷⁰ A similar approach for mobile Internet is likely to be successful.
- Support initiatives through community organizations (for example, women's organizations) that target the local community; engage with them to understand their concerns about any risks, and work with them on how to mitigate potential conflicts or tensions in the community. Getting the community's buy-in is crucial to promote women's and girls' access to and use of mobile and the Internet.
- Work directly with community leaders to create compelling cases for women's technology use – under what conditions would women be allowed to use the Internet? How can this allowance be expanded over time? Are there technologies or policies that can uniquely support these use cases?

¹⁷⁰ GSMA Connected Women, 2015c.



Working in technology and innovation requires different ways of working, using different skill sets and insights. Any risk mitigation strategy will be more effective when working with others in this space.

RAISE AWARENESS

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs*
- » *WEEGE Principles: 3 (Amplify Women’s Voices); 4 (Engage Men and Boys); 5 (Collaborate); 7 (Address Gender-based Violence); 8 (Partner with Women); 10 (Embrace Emerging Innovations)*

Raising awareness on technology-facilitated GBV and other risks and educating (both male and female) users on their rights, privacy, and security, can support other mitigation strategies.

- Support mass media and public campaigns to drive awareness on how to mitigate the risks. Visual campaigns or videos showing what to do in the case of technology-facilitated GBV can be shared through social media. Campaigns can also be tailored to gatekeepers to get their buy-in.
- Collaborate with the private sector (e.g., tech companies and mobile operators) to design and roll out awareness programs highlighting specific benefits from women’s and girls’ being online. Again, these can be tailored to different audiences and gatekeepers.
- Work with social media influencers to reach younger girls (and boys). Reach users on the platforms they are already on — TikTok in Asia, for example — and through people they already listen to and respect. Partner with mega-influencers (for awareness), with macro-influencers (for engagement), and with micro-influencers (for conversion).
- Leverage and adapt existing campaign materials, such as those created by [Take Back The Tech](#).
- Use channels that women already use and trust, and tailor content to reach those with lower literacy and digital literacy skills. Radio and TV are good channels for awareness-raising and information/knowledge-sharing, especially for women with lower levels of access to mobile and the Internet. Because radio and TV tend to involve group activity, in contrast to mobile communication, which is much more private and personal, this is also a good way to reach families and wider communities.

It is crucial to ensure that programs are designed to consider the safeguarding of women and girls.



COLLABORATE AND WORK WITH OTHER NATIONAL STAKEHOLDERS



- » ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Laws and Policies
- » WEEGE Principles: 3 (Amplify Women's Voices); 5 (Collaborate); 7 (Address Gender-based Violence); 8 (Partner with Women)

Working in technology and innovation requires different ways of working, using different skill sets and insights. Any risk mitigation strategy will be more effective when working with others in this space, getting fresh viewpoints and leveraging each other's resources, brands, and networks.

- Work with national governments, judicial systems, and policy makers to put a gender lens on legal frameworks for online safeguarding and security, enabling adequate laws to get passed.
- Work with national governments to ensure that any national laws around data privacy have a gender lens.
- Work with national governments to set up protection systems for women and girls.
- Work with national governments to strengthen law enforcement capacity, to equip them with the tools to manage and address technology-facilitated GBV and other risks, as part of their [Journey to Self-Reliance](#).
- Work with national governments to include risk awareness and mitigation strategies in their formal and non-formal digital literacy training or curricula, and as a priority in national education and ICT policies.
- Form coalitions with other organizations in-country to share resources and increase reach. For example, in several countries, Save the Children works with organizations like NetHope to run child helplines to report online sexual abuse materials or child abuse activity — something that neither organization would have the capacity to run by itself.
- Bring together, or convene, multi-stakeholder groups (such as government, academics, NGOs, the private sector, and women's organizations) to help strengthen responses at the national or system level. For example, work together on safeguarding national action plans for women and girls, or work to strengthen responses to technology-facilitated GBV within the country.
- Form partnerships with national women's organizations, to ensure that they have a say and that women's voices are heard. It is also important to build their organizational and leadership skills, to have the capacity to drive this agenda forward in the future and to ensure sustainability, in a country's Journey to Self-Reliance.
- Work with gender and development organizations that have had decades of experience conducting social norms work, including local organizations with deep context of local norms and past development projects.
- Work with other organizations and coalitions to identify, reuse, and adapt existing digital literacy tools that address risks for women and girls. There are excellent resources already available that are standardized, gender-inclusive, and freely available to be used or adapted.



STRENGTHEN INTERNAL AND PARTNER CAPACITY FOR RISK MITIGATIONS AND SAFEGUARDING

» *ADS 205 Domains: Access and Control*

» *WEEGE Principles: 1 (Understand the Systems); 3 (Be Specific); 6 (Collaborate); 7 (Address Gender-based Violence); 9 (Walk the Talk)*

Development projects and programs in a country are not, as a rule, primarily focused on digital strategies and tools; the people and partners implementing them are often not digital development experts, let alone gender and tech specialists. There is a risk that the negative consequences of women and girls using technology could be amplified, unless people and organizations have clear guidelines as well as the knowledge to implement them. It is crucial to ensure that programs are designed to consider the safeguarding of women and girls, so that they can responsibly access and use ICTs.

- Develop (or adapt) internal digital safeguarding policies, processes, and practices that focus on women and girls, that any program that has digital components must adhere to. Existing internal safeguarding principles can be adapted to include digital safeguarding principles. If a new structure needs to be created, [Girl Effect's principles](#) are a good model to follow or adapt.
- Incorporate a digital lens into any existing GBV strategies, policies, or projects. Technology-facilitated GBV is often not integrated into broader GBV policies (including the 2016 U.S. Government GBV strategy).
- Incorporate a technology-facilitated GBV (and wider risks) lens into any WEEGE gender analyses at the strategy, project, and activity level.
- Train staff and partners on risks and mitigation strategies and policies to strengthen capacity and ensure that the risks are not inadvertently made worse in implementation. The Center for International Private Enterprise delivered face-to-face training workshops on best practices for digital security for some of their partner organizations worldwide, and supplemented this [with an online course](#) to reach more people, leveraging technology at reduced cost.
- Leverage and adapt existing training materials on risks and risk mitigation, such as the resources from Tech Safety or WomensNet.
- Obtain buy-in from Mission Directors for leadership and sustainability.
- Identify internal and partner champions who can mentor others and take the lead in delivering training and capacity building.





BOX 6. WHAT OPPORTUNITIES EXIST FOR USAID DDI/ITR/T TO MITIGATE RISKS?

There are several things USAID can do to mitigate the risks inherent in closing the gender digital divide, at the level of DDI/GenDev or the DDI/Technology Division of ITR.

RESEARCH, DATA, AND METRICS

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision-Making*
- » *WEEGE Principles: 1 (Understand the Systems); 3 (Be Specific); 5 (Collaborate); 6 (Establish the Evidence); 7 (Address Gender-based Violence); 9 (Walk the Talk)*
- Fund ongoing and additional research into the prevalence and impact of the risks — especially technology-facilitated GBV — in different regional and country contexts, to understand it and so be able to address it. This is particularly important for women and girls in Africa and Asia, where data is very limited. This should also include research on the effectiveness of existing prevention and response interventions, and on the support and services that are currently available to women and girls.
- Fund ongoing and additional research into women's and girls' experiences of cybersecurity and data privacy (and what they understand it to be, and where the gaps are), at the individual or household level in low-income countries.
- Fund additional research on risks to specific segments of women and girls. For example, there is little data on how risks affect female entrepreneurs (for example, whether access to market data is manipulated), and how these risks affect work and income for women.
- Work with other organizations and coalitions such as ICRW, EQUALS, or EIGE to coordinate data at a global level and build an international repository of data on technology-facilitated GBV that other players can contribute to. Global data is currently hard to come by; evidence tends to be issue- or country-specific, and anecdotal. Where data exists, there may be under-estimation, as cases of harassment and abuse tend to be under-reported.¹⁷¹
- Work with other organizations and coalitions to help create and roll out a set of standardized definitions and indicators for tracking risks, as well as measurement and data collection tools.
- Work with other organizations to integrate technology-facilitated GBV into GBV studies more broadly, and to integrate technology-facilitated GBV questions into research around the gender digital divide, enabling better understanding of the links and the nuances.

Fund ongoing and additional research into the prevalence and impact of the risks — especially technology-facilitated GBV — in different regional and country contexts, to understand it and so be able to address it.

¹⁷¹ GSMA Connected Women, 2015c.



POLICY AND REGULATION

- » *ADS 205 Domains: Access and Control; Laws and Policies*
- » *WEEGE Principles: 1 (Understand the Systems); 3 (Be Specific); 5 (Collaborate); 6 (Establish the Evidence); 7 (Address Gender-based Violence); 8 (Partner with Women); 9 (Walk the Talk)*
- Work with other organizations and coalitions such as the World Bank, ICRW, EIGE, and the Sexual Violence Research Initiative, to come up with comprehensive, standardized definitions of technology-facilitated GBV, and to disseminate these definitions widely among governments, national statistics offices, academic institutions and researchers, civil society, and the private sector.

Ensure that any work that USAID does on strengthening cybersecurity as part of USAID's Digital Strategy has a gender lens. For example, the draft Strategy states that it will support the "adoption of policies globally that promote free flow of data and intellectual property protection; deterrence of cyber behaviors by state and non-state actors inconsistent with these values; protection of Internet freedom; and development of a cyber-ready workforce." It is crucial that the unique needs and experiences of women and girls are considered in any work that is done in this area.

WIDER GENDER AND ICT ECOSYSTEM

- » *ADS 205 Domains: Access and Control; Cultural Norms and Beliefs; Power and Decision-Making*
- » *WEEGE Principles: 1 (Understand The Systems); 2 (Amplify Women's Voices); 3 (Be Specific); 5 (Collaborate); 6 (Establish The Evidence); 7 (Address Gender-based Violence); 8 (Partner With Women); 9 (Walk The Talk); 10 (Embrace Emerging Innovations)*
- Continue to work with other organizations and coalitions to bridge the gender digital divide by enabling women and girls as users, creators, and employees of technology. This includes creating a positive enabling mobile and Internet environment for women and girls (and their gatekeepers) to feel comfortable in; it also means considering how to create opportunities for women and girls to participate and lead in decision-making over the development and design of new technologies, as well as about how the Internet is governed. This includes supporting initiatives that design technology for women and girls, that bring more women and girls into technology, or that co-create with women and girls.
- Support and fund interventions that specifically address and prevent technology-facilitated GBV or other risks — not only those that support victims once it has happened. This could, for example, form part of the third Women Connect Challenge.



BOX 6. CONTINUED

- Document and share insights about what works and what does not for funded interventions.
- Get (more) involved with the emerging Digital Sexuality Ecosystem that players such as UNESCO or UNICEF are involved in,¹⁷² actively fostering an ecosystem and community of practice in which digital platforms are being used to educate young people about sex (and consent), as well as educating them on risks such as technology-facilitated GBV or online predators. An example is the R.AGE chatbot in Malaysia.
- Work with players such as Porn Hub, who have released sex education content on their Sexual Wellness Center specifically aimed at young men and women who are increasingly using porn as their entry point to learning about sex. The content is sex-positive and specifically focuses on issues that affect young women, such as consent and revenge porn.
- Continue USAID's active role in the Principles of Digital Development by ensuring that Principle 8 (Address Privacy and Security) has a gender lens, as the current guide appears to be gender-blind in this area. This could also include working with organizations like OHCHR, who have specifically called for more gender perspectives in data privacy,¹⁷³ or Girl Effect, who have released a guide for digital privacy and security for adolescent girls.¹⁷⁴

Continue to work with other organizations and coalitions to bridge the gender digital divide by enabling women and girls as users, creators, and employees of technology.

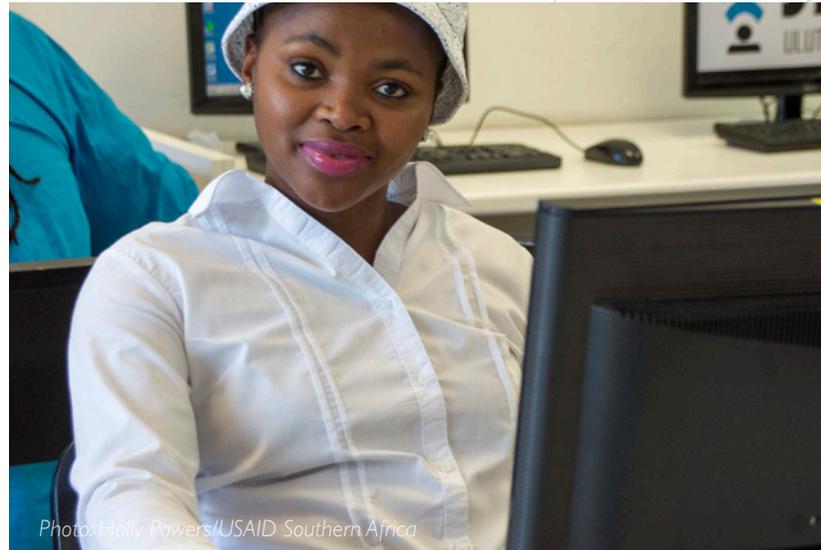


Photo: Holly Powers/USAID Southern Africa

¹⁷² UNESCO, 2020.

¹⁷³ OHCHR, 2019.

¹⁷⁴ Girl Effect, 2016.



Photo: Paula Bronstein/Getty Images/Images of Empowerment

WHAT DATA GAPS EXIST IN THE LITERATURE? WHAT MORE DO WE NEED TO KNOW?

Although the evidence base relating to the gender digital divide and access and use of the Internet has grown significantly in the past few years, there are still a few key data gaps. These include the following.

| LACK OF EVIDENCE AND STANDARDIZATION

- The evidence base for the gender digital divide is weak: the same primary sources are cited in many different reports. While there are more studies appearing in peer-reviewed journals, these still tend to be country- or region-specific and are not necessarily representative for other contexts. Indeed, many of the university studies repeat research that has already been conducted by others, creating the sense in the wider Gender and ICT ecosystem that people are often working in silos and reinventing the wheel, rather than working together to generate evidence.
- There is little statistically relevant data at a global level. Apart from the ITU, no organizations regularly collate sex-disaggregated data on basic ICT and Internet access at a global scale, and none collect data on use. The private sector tends not to collect sex-disaggregated data on their user base; even if the data is anonymized and aggregated, for privacy reasons, tech companies rarely know the gender make-up of their user base. If they do have this data, the private sector rarely shares it publicly.
- There are no widely used standardized measurement methods. Organizations and policymakers often use different statistics and different methods interchangeably.

- There is no agreed definition or indicator of “meaningful” access or use, and so different organizations mean different things by this term. Even though the ITU collects data on both Internet access and use, much of it is not sex disaggregated. Moreover, the “use” indicators are generally focused on computer rather than mobile usage, using indicators such as “copy and paste” and “transferring files” that are not familiar to the majority of the world’s technology users, who use mobile phones.

LACK OF SEX-DISAGGREGATED DATA ON DIGITAL SKILLS

- Although digital literacy and digital skills are a huge barrier to women’s and girls’ Internet access and use, there are no internationally comparable datasets to assess this issue. ITU’s set of eight indicators to measure digital skills has only generated full datasets of sex-disaggregated data for nine countries.¹⁷⁵
- The skills that the ITU digital literacy indicators measure are computer-focused and thus out-of-date, in a world where over 80 percent of Internet users are mobile-first.
- It is not clear what data collection methodologies have been used for the countries that do report, so the reliability of the data is uncertain.
- There is also a lack of standardization on what “digital literacy” and “digital skills” mean. Again, many organizations and policymakers use these terms interchangeably; digital literacy training programs do not necessarily use the same definitions or standardized curricula, making it hard to track progress. The only sex-disaggregated global indicators that do exist (from ITU) may be irrelevant in measuring digital literacy of women and girls in emerging markets, who access the Internet via mobile phones.

The only sex-disaggregated global indicators that do exist (from ITU) may be irrelevant in measuring digital literacy of women and girls in emerging markets, who access the Internet via mobile phones.

LACK OF DATA ON GIRLS UNDER THE AGE OF 18

- There is a dearth of reliable, robust, publicly available datasets on the gender digital divide for girls under the age of 18.
- GSMA only samples adult women over age 18 (mainly because SIM registrations are often restricted to adults 18 and over). The ITU does not appear to have publicly available age and sex-disaggregated data for girls ages 15 to 18, despite having data on youth ages 18 to 24.
- The only major study in this space is from Girl Effect. There are large gaps in the evidence base, without the sort of large-scale national datasets that are available for adult women.
- While there are privacy and ethical concerns with collecting and reporting on data for girls under 18, there is also a need to understand this space better, especially given the huge digital safety and security risks that girls face when online.



¹⁷⁵ EQUALS, 2019.

LACK OF DATA ON RISKS, PARTICULARLY ON TECHNOLOGY-FACILITATED GENDER-BASED VIOLENCE AND POTENTIAL MITIGATION STRATEGIES

- There is a significant lack of data on the risks of technology, specifically around technology-facilitated GBV. It is particularly difficult to measure; it is a complex issue, and there is currently no single metric or indicator that appropriately captures it. Creating standardized, measurable indicators in this topic is a challenge, not only because definitions can vary, but also because data is not systematically collected and shared.¹⁷⁶
- There are tools such as the Cyber Psychological Abuse (CPA) Scale or the Revised Cyber Bullying Inventory, but these have been described as limited, as they often focus on specific cases and they relate to developed countries rather than emerging markets. Indeed, some studies that use the CPA Scale have found no gender differences, but this may be because males are more likely than females to report being victimized by severe cyber abuse.¹⁷⁷
- This is slowly changing: organizations like the ICRW have started to develop standardized measures on technology-facilitated GBV¹⁷⁸ at a global level, and EIGE is working on this for the EU.¹⁷⁹ It is extremely important that we understand the scale of the risks before we start to address them — much as the gender and ICT ecosystem approached the gender digital divide a few years ago.
- There is very little research on technology-facilitated GBV in emerging markets, and there is much we do not know about localized realities of women. There is a need to understand the issue at a local and community level, by generating more research and insights into what works and what does not.
- There is a lack of data on risks for specific segments of women and girls. For example, there is little data on how risks affect female entrepreneurs (for example, if access to market data is manipulated), and how these risks affect work and income for women.
- There is a lack of concrete examples of risk mitigation strategies and what works at the community level, especially in low- and middle-income countries. A lot of the literature focuses on the policy and legal frameworks, or on specific, remedial digital products or apps designed to support users if they have experienced negative effects. There is very little hard evidence of successful interventions, at a country or community level, that work to prevent the risks in the first place.
- Technology-facilitated GBV is often not integrated into GBV studies more broadly; similarly, technology-facilitated GBV questions are often not integrated into research around the gender digital divide. It is often challenging to understand the nuances and the links between these areas. This is also apparent in policies and regulations: for example, the 2016 U.S. Government GBV Strategy does not consider technology-facilitated GBV at all, apart from one minor reference to GBV being both online and offline.

¹⁷⁶ EQUALS, 2019.

¹⁷⁷ Leisring and Giumetti, 2014.

¹⁷⁸ ICRW, 2019.

¹⁷⁹ EQUALS, 2019.

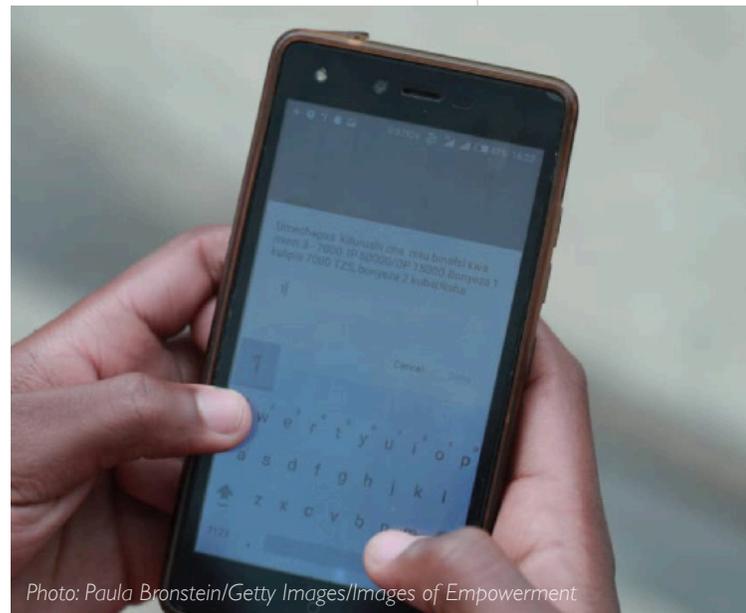


Photo: Paula Bronstein/Getty Images/Images of Empowerment

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