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Developing measures to close the digital gender gap



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Introduction

The United Nations Human Rights Council stated, “the spread of information and communications technology and global interconnectedness has great potential to accelerate human progress” (Resolution 32/13). Internet access facilitates education and work, and allows people to be more involved in global affairs. A world with Internet access is more efficient and more connected, however inequalities in how people are able to use the Internet limits the benefits to society it could provide.

Digital divides, which refers to inequalities in who has access to the Internet, exist between the rich and the poor, developed and less developed countries, younger and older people, well-educated and less educated people, and men and women.

For the people observing the rise of the Internet from more economically developed countries it appears to be a dramatic revolution, but while it is true that technological advances have irreversibly changed human societies, it is all too easy to forget that the story is neither the same in developing countries nor for all demographics. More than 40% of the world’s population has access to the Internet, and even among the poorest 20% of households, nearly 7 out of 10 have a mobile phone. The poorest households are more likely to have access to mobile phones than to toilets or clean water (“World Development Report 2016: Digital Dividends” xiii). However, there are still 4 billion people without any Internet access, nearly 2 billion people without access to a mobile phone, and almost half a billion people living outside areas with a mobile signal (4).

Definition of Key Terms

Digital divide

A digital divide refers to differences in access to and uses of information technology that are correlated with income, race and ethnicity, gender, age, place of residence, and



other measures of socioeconomic status (Noll et al. 1). There can be a digital divide between different individuals, groups or regions. The causes of the digital divide can involve access to technology, but also the ability of individuals and businesses to take advantage of the Internet, as this varies significantly between countries (“Understanding the Digital Divide” 5). The term ‘digital inequality’ may also be used.

The Internet

The Internet is a global network of connected computers able to send data to each other. The Internet includes the World Wide Web as well as services such as instant messaging and emails. (BBC Bitesize: “The Internet”)

World Wide Web

The World Wide Web can be accessed using the Internet; it is a collection of linked Webpages (World Wide Web Foundation: History of the Web).

Literacy

The ability of a person to read and write. If a person is illiterate, and therefore unable to read, they will not be able to understand information displayed in written language on the Internet.

ICT

Information and Communications Technology, or ICT, is any device or program used to process, store and send data.

Digital literacy

Digital literacy is the knowledge and skills required for the effective use of digital devices and information and communication technologies, often for Internet access or communication.

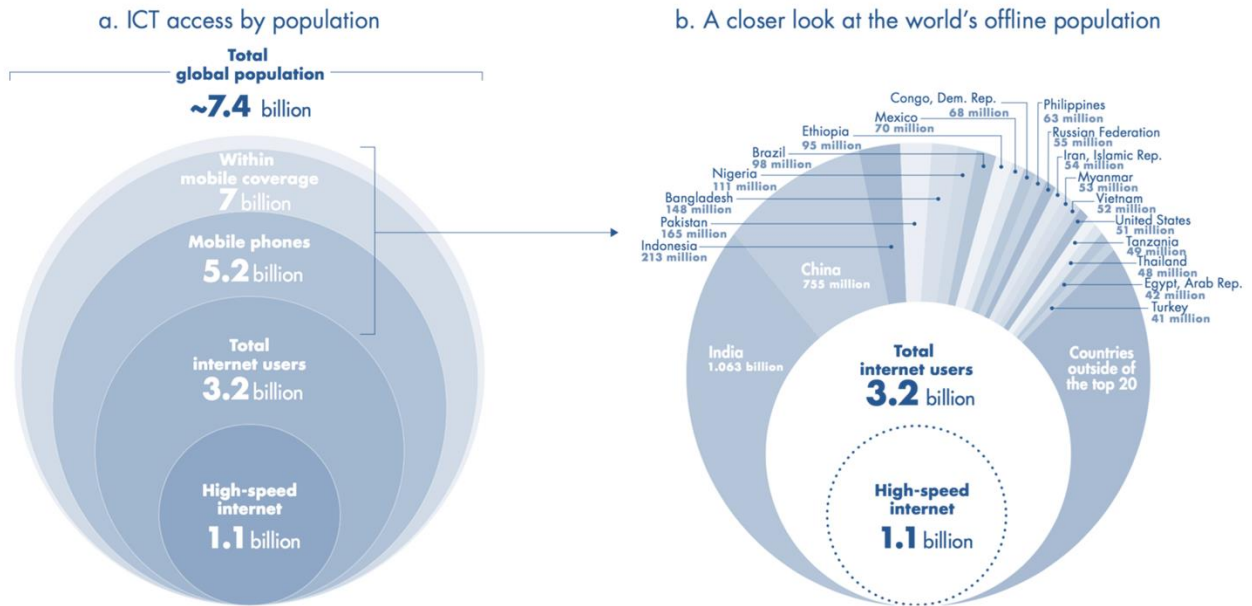
General Overview

Digital Divides

Although there are some people in developed nations who are not able to use the Internet to its full potential (whether it is because of poverty, lack of education or any other reason), 9 out of 10 unconnected people are living in the developing world and therefore



many would argue this is where efforts should be focused in lessening digital inequality (“Women’s Rights Online: Translating Access into Empowerment”, 12).



(“World Development Report 2016: Digital Dividends” 8)

Many studies show that a digital divide not only exists between nations, but also between different demographics of people. How likely a person is to use the Internet is influenced by their gender: women in developing countries are half as likely to use the Internet as men (“Women’s Rights Online Translating Access into Empowerment” 13).

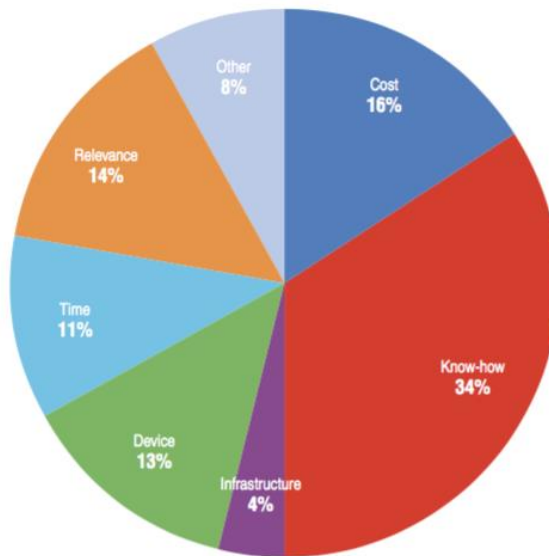
Increasing access to the Internet has benefits for a country since, as existing activities and services become cheaper, quicker, or more convenient, they boost efficiency. Therefore, increased access to mobile phones and the Internet can increase the rate of development as well as inclusion within a society as people get access to services that previously were out of reach (5). For an individual person, access to the Internet provides more opportunities for work and education. Therefore, it is of great importance for states to understand the causes of digital inequality so they can enable people of all genders to make full use of available technology.

Causes of the digital gender gap

The reasons for general inequality in Internet usage can be broken down into five main areas: technical means (software, hardware and quality of Internet connection), autonomy of use, use patterns, social support networks and skills (“Second-Level Digital Divide: Differences in People’s Online Skills”).

Barriers to Internet use among female non users

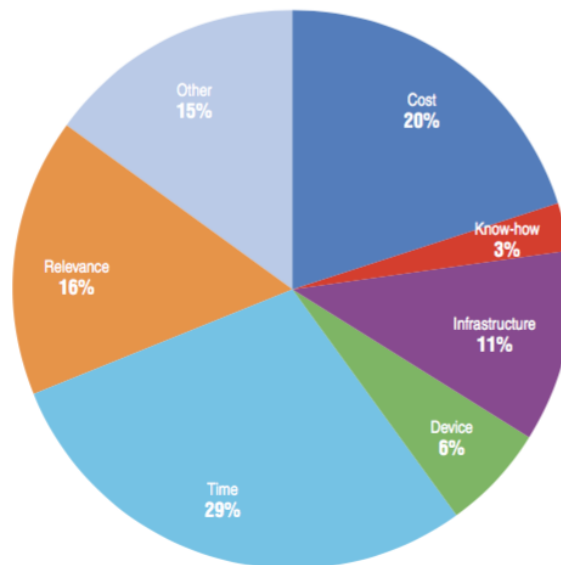
- Cost**
I can't afford it.
- Know-how**
I don't know how to use it.
- Relevance**
I'm not interested in it.
I don't need it / have no use for it.
I use it enough for my needs.
- Time**
I don't have time.
- Infrastructure**
The service is unavailable (no connection at all).
The service is unreliable (no good connection).
I can't charge my device (phone or tablet) regularly enough to use the Internet.
- Access to device**
I don't have a device.
I don't know where to use it.
I don't have a safe place to use it.
- Other**
I'm worried about my identity and privacy online.
I'm not allowed to use it.
I was told it was bad / inappropriate for me.
Other / Don't know.



13 Our survey result is somewhat different from Dalberg's research for Intel, which found that one in five women in India and Egypt felt that the Internet is "not appropriate" for them.

Barriers to using the Internet more often (among female Internet users)

- Cost**
I can't afford it.
- Know-how**
I don't know how to use it.
- Relevance**
I'm not interested in it.
I don't need it / have no use for it.
I use it enough for my needs.
- Time**
I don't have time.
- Infrastructure**
The service is unavailable (no connection at all).
The service is unreliable (no good connection).
I can't charge my device (phone or tablet) regularly enough to use the Internet.
- Access to device**
I don't have a device.
I don't know where to use it.
I don't have a safe place to use it.
- Other**
I'm worried about my identity and privacy online.
I'm not allowed to use it.
I was told it was bad / inappropriate for me.
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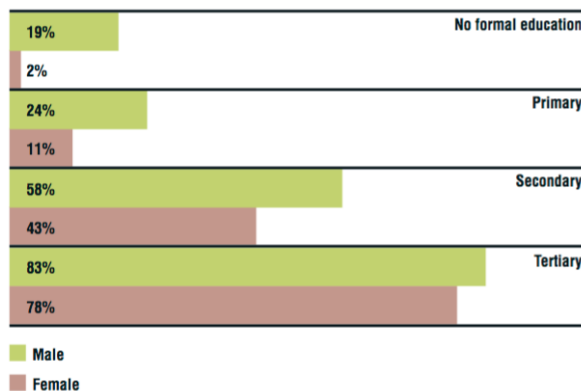


(‘Women’s Rights Online Translating Access into Empowerment’, 23)

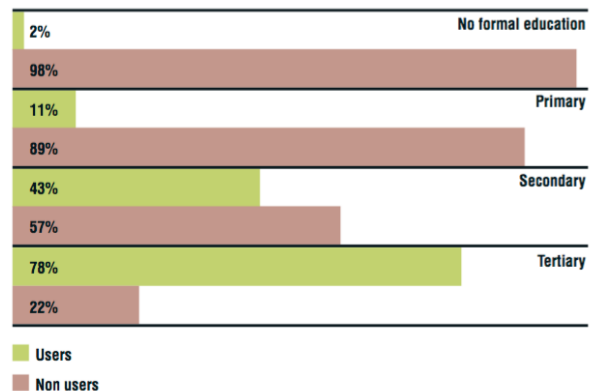
Skills

According to a study done by the World Wide Web Foundation, conducted in a range of slum areas and informal settlements in 10 cities, women are 1.6 times more likely than men to report lack of skills as a barrier to Internet use. However, they also found evidence to suggest that a higher level of general education even without any classes relating to Internet use caused women to be more likely to use the Internet: “Among those with little or no schooling, 40% of women and 33% of men say they “don’t know how [to use the internet]”. This drops to 9% of men and 18% of women with secondary education, and only 3% of men and 5% of women with tertiary education” (17). A person who has had more schooling may feel more confident in their abilities and therefore be more likely to try to learn how to access the Internet, but amongst those with very little education illiteracy is a larger factor. Being unable to read in any language, or a lack of material online in a person’s native language, prevents someone from being able to use the Internet, and since two-thirds of the 774 million illiterate people in the world are female (*UNESCO Education for All Global Monitoring Report: Girls’ Education*) this is a contributing factor in the digital gender gap. It is understandable that someone who is not aware of how to access the Internet is unlikely to use it, and a lack of skills is therefore one of the largest barriers to people benefitting from the Internet.

Internet users by education level



Women’s Internet use based on education level



(“Women’s Rights Online Translating Access into Empowerment” 15)

Autonomy of use and use patterns

It is possible that, particularly in developing countries, stigmas surrounding women’s use of the Internet are discouraging them from using it. Of men surveyed in New Delhi and Manila nearly two-thirds agreed with the statement that women should not be allowed to use the Internet in public places, and over half agreed that men have the responsibility to restrict what women look at online (5). One woman said that ‘it is perfectly acceptable for men to go to a restaurant to use Wi-Fi for any reason at all (even surfing pornography), but frowned on

for women to do the same, even to send a document urgently requested at work. Our society sees us as stay-at-home assets' (22). Some women are not allowed equal access to the Internet and technology; feel that both their families and communities who do not see it as an appropriate use of their time, or even fear violence are judging them for it. In the modern world, women are increasingly likely to work, however until the digital gender gap is closed they will be at a disadvantage in the workplace, fuelling the inequality at the root of the problem.

Social support networks

If any person has family or friends nearby to offer assistance, then that person will find it less difficult to learn how to use technology. Similarly, a supportive community, especially one where a large number of women are already using the Internet, will encourage someone to try it for him or herself.

Technical means

Technical means includes whether a person has access to a computer or other device with Internet connection, a convenient place to charge a device, and a connection to the Internet. As only around 15% of people can afford access to broadband Internet ("World Development Report 2016: Digital Dividends" 9), it is clear that this is an issue revolving around poverty and financial inequality. We know that a lack of technical means prevents internet access, however it is debatable whether technical means are a cause of the digital divide between genders specifically as there is little information as to whether women are less able to afford ICT than men.

Barriers to Internet use in the developed world

The digital gender divide is most apparent in developing countries, but in some more economically developed countries there are persisting issues. Men are 2.7 times more likely than women to work in the ICT sector and 7.6 times more likely to be in ICT related occupations ("World Development Report 2016: Digital Dividends" 106). Online, women are also more likely to receive abuse: of 1053 women in Australia surveyed by Norton, 1 in 7 had received threats of physical violence online, and this figure rose to 1 in 4 for women under 30. 76% of women under 30 had experienced some form of harassment, which can include rape or death threats as well as sexual harassment ("Online harassment of women at risk of becoming established norm"). Events such as these prevent women and minority groups using the Internet to its full potential, especially concerning use of social media, but they are rarely reported to the police.



Major Parties Involved

China

47.6% of Internet users in China are women, as of December 2016 (“Statistical Report on Internet Development in China”). This has been steadily increasing since 2013, when it was 44%, and now is close to the percentage of China’s population which is female, 48.5% in 2015 (Trading Economics: “China - Population, female (% of total)”). Therefore, the digital gender divide is small in China, and digital inequality is instead found predominantly between people of different education levels and ages.

India

It is often reported that India has the fastest growing economy in the world, having overtaken China in 2015. This has led to increased financial development and wage growth, including in rural areas; however, India is ranked 120th out of 131 countries for female participation in the labour force, and it has the most people lacking Internet connection of any country in the world (“World Development Report 2016: Digital Dividends”, 8). Only 40% of 26 to 45 year-old women are economically active, and 65% of women with college degrees are not in work (“India’s Economic Fundamentals Remain Strong”). According to the World Bank, India’s potential GDP growth could increase by 1 percentage point if just half of the gap in the female labour force participation rate between India and Bangladesh or Indonesia was closed.

Sexist attitudes and discrimination teach women that many jobs are not appropriate for them, that they should stay at home rather than get a job, or that they should not have access to the Internet. In a world that is becoming more reliant on technology, increased access to the Internet and digital literacy could give women more opportunities, prolonging India’s economic growth.

The mandate calls for the IGF to ‘advise all stakeholders in proposing ways and means to accelerate the availability and affordability of the Internet in the developing world’ (Internet Governance Forum: About the IGF).

Nigeria

Nigeria has the most Internet users of any African country, however it also has the largest population of any African country, and only 18.4% of women, compared with 34.3% of men, reported using the Internet in the last week according to a study of 4000 Nigerian adults in 2014 (“Contemporary Media Use in Nigeria”). As a developing country, the causes of this

include poverty and lack of education, but unlike others, Nigeria is home to over 500 local languages. Even for those who are literate in one of Nigeria's more common languages, there are very few online resources written in these and as women on average receive less education than men they are unlikely to be able to understand the vast amount of content written in English ("Freedom on the Net 2016: Nigeria Country Profile").

United Nations University of Computing and Society

A research institute with projects including ICT's that promote women's empowerment and enable sustainable community led development, aiming to impact policy-makers through their research ideas. A particular area of interest is improving women's access to and effective use of technology, especially for women within marginalized populations, such as migrants or rural women in low-income countries (United Nations University Computing and Society: About).

Timeline of Key Events

Date	Description of Event
July 2006	Internet Governance Forum Announced by UN Secretary General
November 2005	Tunis Summit (World Summit on the Internet Society) is held, followed by guidelines to ensure Internet access is universal and affordable.
21 September 2004	The formation of the Working Group on Internet Governance.
December 2003	Geneva Summit (World Summit on the Internet Society) is held.
July 2000	Some figures published showed an emerging digital gender gap: in the United Kingdom, 52% of men accessed the Internet in July 2000 but only 39% of women ("Understanding the Digital Divide", 21).
20 th December 1990	First website goes live: the beginning of the web.
1975	The first personal computers were sold, but high costs meant that only a few people mostly in more economically developed



countries used them.

UN involvement, Relevant Resolutions, Treaties and Events

- Geneva Summit December 2003: World Summit on the Internet Society (WSIS). The 'Action Lines' included access to information and knowledge, cultural diversity and identity linguistic diversity and local content, and the promotion of ICT for development. 175 member states adopted a Declaration of Principles, which set the goal of bringing 50% of the world's population online by 2015, but other issues were not resolved so the Working Group on Internet Governance was created. The UN agencies responsible for convening the WSIS were the ITU, UNESCO, UNCTAD, and UNDP.

The International Telecommunication Union (ITU) is a specialized agency of the UN, with members including 193 member states, ICT regulators, academic institutions and roughly 700 tech companies. The ITU works to protect every person's right to communicate by bringing modern communication technologies to people everywhere in an efficient, safe, easy and affordable manner (ITU: "Overview"). 'Connect the World' summits are organised with the aim of mobilising resources to implement the connectivity targets of the World Summit on the Information Society (ITU: "Connect the World").

- Tunis Summit November 2005: World Summit on the Internet Society. The Tunis Commitment and the Tunis Agenda for the Information Society were agreed upon, and the Internet Governance Forum (IGF) was created.

The Association for Progressive Communications (APC), an international network of civil society organisations, works in communications and information policy, and promoting women's rights, as well as consulting the United Nations Economic and Social Council. At the Tunis Summit, the APC proposed actions in areas including the establishment of an Internet Governance Forum, and ensuring internet access is universal and affordable without discrimination.

The Internet Governance Forum (IGF), which was then formed, is a multi-stakeholder forum for discussions on public policy issues relating to the Internet, which holds an annual meeting. They do not reach a negotiated outcome, but instead serve to inform and influence those with policy-making power in both the public and private sectors: 'the IGF facilitates a common understanding of how to maximize Internet opportunities and address risks and challenges that arise' (Internet Governance



Forum: About the IGF). The mandate of the IGF was set out in paragraphs 72 to 78 of the Tunis Agenda and extended for 10 years by General Assembly resolution 70/125 ('Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society') on the 16th of December 2015.

- On the 1st July 2016, the UN Human Rights Council adopted resolution A/HRC/RES/32/13: The promotion, protection and enjoyment of human rights on the Internet. This resolution contained the following clauses:
 4. Affirms that quality education plays a decisive role in development, and therefore calls upon all States to promote digital literacy and to facilitate access to information on the Internet, which can be an important tool in facilitating the promotion of the right to education;
 5. Also affirms the importance of applying a comprehensive human rights-based approach in providing and in expanding access to the Internet, and requests all States to make efforts to bridge the many forms of digital divide;
 6. Calls upon all States to bridge the gender digital divide and to enhance the use of enabling technology, in particular, information and communications technology, to promote the empowerment of all women and girls;

Previous Attempts to Resolve the Issue

Many projects aim to increase the rate of development and these will have a positive effect on reducing the gender disparity in computer use as people are lifted out of poverty and receive better education.

The UN Human Rights Council has made resolutions calling upon all States to 'bridge the gender digital divide and enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of all women and girls', and condemning 'gender based violence, committed against persons for exercising their human rights and fundamental freedoms on the Internet' (Resolution 32/13 The promotion, protection and enjoyment of human rights on the Internet), however if states do not take this advice it will be ineffective.

Forums and summits, such as the Internet Governance Forum and those held by the International Telecommunications Union, attempt to use research to impact policy making in

a way, which is beneficial for promoting women's use of ICT. These bring together states, companies and regulators to reach decisions on what is best practice within the industry.

Large ICT related companies are creating new programmes to bring the internet to unconnected people in developing countries, including Facebook's internet.org and their approach: 'Free Basics'. Internet.org claims "Free Basics by Facebook provides people with access to useful services on their mobile phones in markets where internet access may be less affordable. The websites are available for free without data charges, and include content on things like news, employment, health, education and local information. By introducing people to the benefits of the internet through these websites, we hope to bring more people online and help improve their lives." (Internet.org: "Our Approach"). Such systems have however been criticised for going against the principle of net neutrality by only allowing access to certain websites.

Possible Solutions

Many aspects of economic and social development will in turn create a decrease in the digital gender gap, however it is possible to focus on a few specific points which are likely to have the largest impact. The UN Human Rights Council suggests "enhancing [girls'] access to information and communications technology, promoting digital literacy and the participation of women and girls in education and training on information and communications technology, and encouraging women and girls to embark on careers in the sciences and information and communications technology." (Resolution 32/13)

Providing general education for more girls, at a higher level, will increase their literacy and confidence in their abilities, leading more of them to attempt to use technology. Additionally, education specifically in the use of ICT or in foreign languages if a person's native language is underrepresented on the Internet, for both children and adults, could help lessen the digital divides.

The development and sale of affordable technology for people living in less economically developed countries would allow more women to have access to it. This could be achieved with rent or gradual payment schemes with low interest rates for people on low incomes, run by private companies, or by finding ways to manufacture computers and phones safely with cheaper materials and providing affordable Internet connections.

Programmes to combat sexism and change societal attitudes to women's use of the Internet will result in women and girls feeling more safe, as well as being more likely to see the ICT industry as a viable career path. This could be done through education programs in



schools, talks and advertising through a variety of appropriate media. A more coordinated approach to closing the digital gender gap could be beneficial.

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