Digital Gender Divide in Information Communication Technologies (Icts)

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ABSTRACT   *While there is recognition of the potential of ICT as a tool for the promotion of gender equality and the empowerment of women, a "Digital Gender Divide" has also been identified, reflected in the lower numbers of women accessing and using ICT compared with men. Unless this gender divide is specifically addressed, there is a risk that ICT may exacerbate existing inequalities between women and men and create new forms of inequality. This paper discuss the potential of ICTs for ensuring gender equity as well as the factors as Constraints for lower participation of women in use and access to ICTs. It also profiles few initiatives to promote the gender equality among the men and women and to empower the women to improve their livelihood chances.*

Introduction:
The information society and gender equality

The rapid global spread of information and communication technologies (ICTs), and particularly the explosion of mobile Internet devices (ITU 2012a:2-3), is redefining not only the realms of information and communication, but the very nature of social structures and institutions (Castells, 2000).

ICT is an umbrella term that includes any communication device or application, encompassing radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as video-conferencing and distance learning (Rouse 2005). Television, computers, cellphones, the Internet, and their delivery systems – cable, wireless, telephony, satellite, broadcast – converge to pave the way for what is referred to as the 'information revolution' or digital revolution'. With the digital revolution, the way in which information is produced, stored, processed, distributed and exchanged is fundamentally transformed.

Today, the Internet, as the backbone of our global information and communication systems, enables different hardware and software tools to come together as a massive global network. The resultant social phenomenon is often referred to as the 'information society' or 'network society'. The information society is not gender neutral – it has different implications for women and men, girls and boys, and for the relationships between them. It is therefore vital to begin reflecting more critically on how ICTs are changing the nature of gender relations in social, political, economic and cultural landscapes. On one hand is important to recognise the potential of increased ICT access and connectivity for transforming gender power relations and empowering women - especially those who are poor.

On the other hand it is essential that we do not put all our faith in ICTs to 'solve' the problem of gender inequalities. Today, an increasing number of women have access to digital technologies. But all too often, when women use smart phones or access the Internet, the assumption is made that putting these technologies into their hands will be necessarily empowering. Without discounting any possibilities for gender-transformative change in the information society, it is important to examine how techno-social practices reproduce gender power differentials, what norms are privileged in the structures of the Internet, and how the logic of techno-social spaces is contingent upon the design and production of technological architectures (Wajcman, 2007). Above all it is imperative to ensure that ICTs are not manipulated in ways that deepen existing gender inequalities or create new ones. From a gender justice standpoint, a more nuanced and longer-term perspective than 'give-access-get- empowerment' is needed for positive gender outcomes in the information society (Vaughan, 2006).

The brief starts by discussing the existing data on the gender gap in access to ICTs, as a means to deepen understanding of the underlying barriers that constrain women's effective participation in the information society. It moves on to a discussion of women's rights and the empowerment capacity of the internet.

1. Access to Internet and ICTs in India: A gendered analysis

The International Telecommunications Union, in its 'Measuring the Information Society' Report of 2013, places India in the category of the World's 'Least Connected Countries' based on a composite measure of ICT access, ICT use and ICT skills. Further, there is clearly a gender gap in access to ICTs. For example: The Intel Women and the Web Study 2013 found that while 8.4% of Indian women, and 11.6% of Indian men are online, there is a weighted gender gap of 27% – meaning that a woman in India is 27% less likely to have Internet access than a man. Similarly, studies by the GSMA Development Fund and the Cherie Blair Foundation have revealed that "only 28% of Indian women own a mobile phone, compared with 40% of men".

It is important to interpret the gender gap in access as indicative of underlying structural inequalities – especially in education and income – between women and men; and refrain from naive digital divide analyses that will result in ineffectual 'give-access-get-empowerment' solutions. Further, the gender gap in Internet access is also illustrative of a new divide that is emerging between the developed world, and developing countries – the 'communications capacity' gap, or the gap in the capacity to transmit information online, arising from the tendency of developing countries to use low bandwidth, mobile broadband as a replacement for high bandwidth, fixed broadband. In fact, in many of these countries (including India) many development interventions end up being fixated in "mobiles for women's empowerment", simply ignoring the issue of how innovations for inclusion and women's empowerment for longer term gains will need more than 'voice' or telephony based interconnectivity.

2. Evidence on gender and ICTs:

Available data indicates that women and men do not have equal opportunities to access mobile phones and the broadband Internet. In order to develop relevant, effective and gender-sensitive policies and programmes at local, national and global levels it is therefore necessary to undertake a detailed analysis that examine the gender gaps in access to specific ICTs and   the gendered patterns of use for each type of ICT.

2.1 Gender gap in access to mobile phones:

Mobile telephony has been one of the fastest growing technologies in the world, with mobile networks roughly doubling in size every two years, since 2002 (World Bank 2012:115). In fact, by 2011, around 90 economies across the world had mobile penetration rates of up   to 100 percent (ibid.). However, despite the clear growth of mobile phones, there is a still significant gender

gap in access to these technologies.

The 2010 Global Study on the Mobile Phone Gender Gap in Low- and Middle- Income Countries, led by the Global System of Mobile Communications Operator Organisation (GMSA) clearly indicates that there is a significant difference between men and women in terms of mobile phone coverage. In fact, a woman is 21 percent less likely to own a mobile phone than a man. This figure increases to 23 percent if she lives in Africa, 24 percent if she lives in the Middle East, and 37 percent if she lives in South Asia (GSMA 2010: 6).

The study also indicated that household income, geographic location, age, occupation and level of education play a key role in determining whether a woman is able to own a mobile phone in low and middle-income countries (GSMA 2010: 8).

2.2 gender gap in access to internet:
Existing sex-disaggregated data clearly reveals that there is not just one Internet gender gap, but many.

Firstly, there is a global gender gap in access to the Internet. Recent research by Intel has found that the Internet gender gap, preventing a staggering 200 million women from participating online, is likely to continue to grow (Intel 2013: 22). This claim is supported by the ITU, which forecasted that by the end of 2013, 1.3 billion Internet users would be women (or 37 percent of all women worldwide), compared to 1.5 billion men online (41 percent of all men), resulting in a total global Internet gender gap of 200 million (ITU 2013).

Secondly, there is another gap between women in the developing world and their counterparts. In developing countries, 16 percent fewer women than men use the Internet, compared with only 2 percent fewer women than men in the developed world (ITU 2013).

Thirdly, it is important to always remember that there is a gender gap not only in access to the Internet, but also in patterns of use of the Internet, among men and women (Bimber 2000, cited in Broadband Commission Working Group on Broadband and Gender 2013). In fact, women and men exhibit different patterns of use of the Internet, with quantifiable gaps increasing for more sophisticated uses (Broadband Commission Working Group on Broadband and Gender 2013: 23; Deen-Swarray and Moyo 2013).

3. Constraints for lower participation of women:
3.1 Structural factors:
Mobile telephones have played an important role in connecting women to the information society. Yet, as noted above, gender-related concerns on access and use remain. As Deen-Swarray, Gilwald and Morrell (2013) observe the systematic deconstruction of existingsex-disaggregated data-on access to mobile phones and the Internet clearly reveal that the gender gap is symptomatic of underlying social structures that perpetuate gender inequality in everyday life. In fact, existing evidence testifies to the fact that the gender gap in income and education levels is key contributors to the gender gap in ICT access.

3.2 Social and relational factors:
As a personal communication device, the mobile phone brings women into the public sphere, even if it is a small, local social network at the outset. Yet this cultural shift can be potentially threatening to. A serious barrier to women's use of ICTs is the policing and control by male relatives and community members, especially with respect to women's use of mobile phones. For example in India, caste panchayats in Uttar Pradesh known for their regressive gender politics have banned mobile phone use for unmarried women as they feel they encourage 'loose' con-

duct (Indian Express 2010). Research from Zambia reveals that women have been threatened, intimidated and even beaten by spouses who seek to control when and where they utilise their mobile phones (Wakunuma 2012). Similarly, the Internet is often portrayed as a 'corrupting' influence on women in some developing countries (Intel 2013:46).

3.3 women and the communication capacity gap:
In 2013, the International Telecommunication Union found that the rate of growth of mobile broadband subscriptions exceeded that of fixed broadband subscriptions, especially in the developing world. Also, in developing countries, low-bandwidth mobile broadband is fast becoming a substitute/replacement for high-bandwidth, fixed broadband. This trend has led to the emergence of a new 'digital divide' an increasing inequality in communications capacity between developed and developing countries. In 2001, citizens in developed countries had access to broadband speeds of 40 Kilobytes per second (Kbps) more than their counterparts in developing countries. What this suggests is that there is a different kind of digital divide when we measure communication capacity not only in terms of the installed number of devices, but also in terms of the transmitted amount of information.

According to the ITU, the majority of users in developing countries are reliant on low-bandwidth mobile broadband infrastructure (ITU 2012: 8). For example only 7 percent of people in the Asia Pacific region have fixed broadband access. It is also the most digitally divided region in the world, with the Republic of Korea boasting 37.5 percent fixed broadband penetration, compared to Myanmar with only 0.01 percent (ITU and UNESCAP 2013). Hence, for most users in remote, rural areas of the developing world, current ICT infrastructure arrangements significantly restrict the type and quality of applications and services that can be accessed over the Internet.

The implications of the communication capacity gap for women's access to the Internet become clearer when read against the fact that, for many women in developing country contexts, the costs of devices and connections, poor quality of broadband connections, and the limited availability of ICT services outside major urban areas, continue to be major hindrances to their effective use of the Internet.

This section has noted that the gender gap in access and use of ICTs is multi-dimensional. It is vital to pay attention to key enabling factors such as income and education, but it is equally important to address social factors that may inhibit access; as well as structural reasons, such as ICT market development and lack of appropriate public investment.

Policy recommendations to promote meaningful access:
Gender issues need to be identified and addressed in all aspects of development and implementation of ICT policy and regulatory frameworks.

Access to ICTs should be understood as access to the gains of the information society. For rural and marginalised women, this implies that the Internet's essential functionalities and services, such as email, Web search facilities, and social networking platforms, are made available as public goods.

For reaching women particularly in rural areas multiple forms of media and communication technologies like computers and the internet, are to combine with technologies that reach more women such as radio, television and print media.

There is a need for new forms of public access that go beyond internet cafés. Community digital libraries, where low-cost tablets preloaded with content and sim cards can be borrowed; public in-

formation can be accessed; and digital literacy and skill development can be obtained.

Immediate efforts are needed to ensure greater affordability of mobile and other technologies for all, while making access to affordable broadband an important citizen right.

Publicly-funded research is also needed on the role of specific devices in determining how women and girls benefit from information and communication flows and networks. The development of a standardised set of sex-disaggregated indicators will enable more robust data gathering processes at the national and global levels.

Conclusions:

The characteristics of digital technology provide potentially powerful means for the empowerment of women in developed and developing countries. But in the developing countries like India women and men do not have equal opportunities to access mobile phones and broad band internet. Regional variations are also significant. For instance the type and quality of applications and services that can be accessed over the internet may be very limited. It also noticed that women are under-represented in ICT sector employment which stressed the need of the public policies go beyond the provision of basic ICT skills. Women in information society especially rural and marginalised sectors required long-term public support, continued training, access to necessary resources, and help in expanding their skills. Thus the gender gap in ICTs calls for new policies on gender and ICTs that promote gender equitable digital inclusion as well as equal digital architectures.

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