Understanding the Linkages between ICT and Empowerment: A Gendered Perspective

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Abstract

Purpose: *The paper examines the role of Information and Communication Technology (ICT) in promoting gender equality in India.*

Design/Methodology: *The present work is based on secondary sources of data, therefore related literature is consulted in order to understand the linkages between ICT and women empowerment.*

Findings: G*ender inequality remains the basis for disempowerment of women and how the effective usage of ICT could lead to their empowerment. It takes into account the successful examples used worldwide, which could be adapted in the Indian context. It also puts forth how Sustainable Development Goal 5 (SDG 5), which directly focuses on gender equality, can be achieved by using ICT effectively.*

Research Limitations/Implications: *The study is only confined to the role of ICT on empowering women.*

Originality/Value: *The present theme of study is an under researched area, therefore it will add to the already existing literature of ICT and its linkage with the empowerment of women.*

Keywords: *Gender equality, ICT, SDG, Empowerment, Development.*

Introduction

Gender refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women **(World Health Organization, 2017)**. These roles and responsibilities are different for males and females and are often defined by certain cultural norms, practices, social structures, and a patriarchal society. Males predominantly hold power and are involved in decision-making and females have a less say in all the affairs. This forms the basis of gender inequality whereby women face discrimination. The concept of gender inequality forms its basis over the patriarchy, as it sets the standards for gender equality. It is not only to be conceptualized as a discrimination between men and women but a core of hierarchal social organizations as it has a hold on almost all social institutions and cultural practices of a society. Patriarchy is a germinal ideology, and the global gender order is its organizational form **(**Reardon **as cited in Hans, 2015).** In India, gender inequality permeates in all the phases of a woman's life. Eventually it becomes a vicious circle, which starts even before her birth and ends with her life. **Ghani, Kerr and O'Connell (2012)** cite that "The UN Gender Equality Index has ranked India below several Sub-Saharan African countries. Gender disparities are even more pronounced in economic participation and women's business

condition in India". Gender inequalities form a major barrier for women to access their rights and as such limits the scope of progress for them. Hence, gender equality has been echoed in various policy documents as this lays the foundation for development of any nation. Gender equality means more decision making power for women, more opportunities for growth, employment and development. Gender equality, therefore, is the current subject of concern among the policy makers of the world because of enhancing economic growth and maintaining continuity of the development process as well **(Khatun, 2002)**. Gender inequality remains a major barrier to the development, particularly human development of any nation. The work of **United Nations Development Programme in India (2017)** "About India: Challenges" states that the "*Disparity in India is not likely to be eliminated soon. India's poor performance on women's empowerment and gender inequality is reflected in many indicators*". Gender inequality in India is clearly reflected in the low rank in United Nations Development Programme's Gender Inequality Index.

Towards this end, thorough discussions and debates are being done. Many authors have pointed towards the role of empowerment in bringing women at par with men and thus achieving gender equality in real terms. Empowerment of women can be pivotal tool in reaching towards the goal of gender equality, which can be achieved to effective usage of technology.

Literature Review

In order to understand and gain insights into various dimensions of women and their relationship with technology, it is important to understand the linkage between gender inequalities and usage of ICT by women. Gender inequalities are deeply embedded in the social fabric of a patriarchal society. It forms the basis of discrimination in every sphere of women's life. Many studies have illustrated the importance of viewing technology through the social perspective as **Wajcman (2004)** points that "Technology must be understood as a part of social fabric that holds society together; it is never merely technical or social. Rather a technology is always a socio-material product, a seamless web or network combination artifacts, people, organizations, cultural meanings and knowledge". Society, social relationship, social institutions and the social fabric always remain an important factor of women empowerment and their relation with important empowerment tools like ICT. One of the important perspectives of social relationships and ICT has been stressed in the Domestication Theory. This theory points out an important perspective of "how individual's social relationships impact usage." It also emphasizes the importance of not only understanding why or why not

ICT is adopted, but also how people adopt (or tinker) with ICT and how this "*tinkering*" affects the ICT use **(Lie & Sorenson, 1996)**.

Many studies show that ICT has a significant role to play in empowering women and promoting gender equality. In the report of UN Division for advancement of women on 'gender equality and empowerment of women through ICT', **Sandys (2005)** points out that 'ICTs can be powerful catalysts for political and social empowerment of women and promotion of gender equality'. However, due to the persistent gender inequalities in India, women have to face certain challenges which make access of ICT difficult for them. These challenges are rooted not only in economic but also in social and cultural factors, leading to obstacles that limit women to benefit from the ICT revolution, and thus creating a gender digital divide **(Daly, 2003; Hafkin & Tagart, 2001; Huyer & Mitter, 2003; Huyer & Sikoska, 2003)**.

The concept of gender digital divide is not merely based on the concept of access and availability of services. The divide forms its foundation on a web of socially constructed factors that limits the usage of these services. The usage and access of these services by women must be understood from a different perspective. Since other areas of an individual's life bleed into their home lives, it is important even for studies that concentrate on the home environment to consider ICT usage in other contexts **(Haddon, 2007)**. Although technology and gender are both socially constructed and socially pervasive, we can never fully understand one without understanding the other **(Lohan & Faulkner, 2004)**. Historically, technology has been defined exclusively as male activities in such a way that many tasks women have traditionally performed (such as knitting) are not defined as technical, despite involving a high degree of manual dexterity and computation **(**Cockburn **as cited in Henwood, 1994).** Women's alienation from technology is accounted for in terms of the historical and cultural construction of technology as masculine **(Wajcman, 1991)**. Another important aspect of women's exclusion from technology is based on cultural constructions of a society. As **Henwood (1994)** says:

"Our theorizing of the gender and information technology relationship should not be reduced to the simple 'man equals technology literate, women equals technology illiterate' formulation. Technological meanings are not 'given'; they are made. Our task trying to transform the gendered relations of technology should not be focused on gaining access to the knowledge as it is but with creating that knowledge. By this I mean to be involved at the level of definition, of making meanings and in creating technological culture".

Methodology

The present work is primarily based on secondary sources of data, therefore it analyses the work of various authors, publications from institutions like World Bank and United Nations. A considerable portion of work has been drawn from the Sustainable Development Goals, particularly Goal 5.

Women and their Empowerment

Women constitute 48.5% of the population i.e. almost half population of India. They account for 23-24% of the total labor force and generate 17% of the share of gross domestic product (GDP) **(Woetzel et al., 2015)**. They can be better players in the economy if their potential is tapped in a positive manner and they are empowered. According to a study by **Woetzel et al. (2015)**, "India can increase its 2025 GDP, estimated at USD4.83 trillion, by between 16% and 60% simply by enabling women to participate in the economy at par with men". Empowerment of women remains a main area of concern. It has been viewed as a process through which women can gain power over men or as a process that enables women to gain access to decision-making processes and instances of power **(Oxaal & Baden, 1997)**. Empowerment indicates that women have enhanced capacities and capabilities so that they are able to take decisions, have freedom and access to resources and opportunities. It directly means challenging the social systems, cultural norms and patriarchy because they form the basis of gender inequality. According to the **United Nations Population Information Network [POPIN] (n.d.)**, 'women's empowerment have five components: "*women's sense of self worth; their right to have and to determine choices; their right to have access to opportunities and resources; their right to have the power to control their own lives, both within and outside the home; and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally*". Certain empowerment models for women show how empowerment can lead to gender equality. One of the widely accepted models is the Longwe model **(Longwe, 1990)**. This model discusses five levels of gender equality as: Welfare, Access, Conscientization, Participation, and Control. In her model, Longwe states that higher the levels of equality, higher are the chances of women's development and empowerment. Thus, empowerment remains a central concept for gender equality and ICT can be a key player in empowerment.

Women and Technology

The World Bank Group defines ICT to consist of hardware, software, networks, and media for collection, storage, processing transmission, and

presentation of information in the form of voice, data, text, and images. These range from telephone, radio and television to the internet **(Hafkin, Bhatnagar, Bhatnagar, Huyer & Tandon, 2003)**. In contemporary times, ICT has gained momentum and has been viewed as an effective tool of change. The effect of ICT has permeated in all spheres of life and has opened up new opportunities of economic growth and development. It has brought a positive change and is considered as strong and pivotal tool of empowerment for women. As ICT began to unveil its positive role, the necessity of its incorporation within the gamete of women's life was held. However, a fact here remains that for women, gender disparity is present in this arena also and it eventually constitutes the term "gender digital divide". Here it becomes important to explore the relationship between women and digital divide. Is this divide based only on the variable of sex (biological identification of men and women)? Or it is to be conceptualized through the core of gender inequalities present throughout women's life. Past literature suggests that women were not the first to adapt the technology and enter the digital era (e.g. **Dholakia, Dholakia & Pedersen, 1994; National Telecommunications and Information Administration [NTIA], 1999)**. Women undervalued their usage skills, which lead to lower self-efficacy to the usage of ICT **(Busch, 1995; Hargittai & Shafer, 2006; Joiner, Messer, Littleton & Light, 1996)**, as well as in their general outlook towards technology and computers **(Shashaani, 1994**). As a result, the widespread belief was that "men are more interested in technology than women, and they are also more tech savvy" **(Fallows, 2005)** and thus ICT began to be considered as "toy for the boys" **(Faulkner, 2001)**.

Gender inequalities play a vital role in steering away women from the technology. In India the concept of gender inequality is deeply rooted, and the trend for digital divide starts early. The **United Nations Development Programme's (1999)** "Human Rights Report 1999" shows that in the United States, boys are five times more likely than girls to use home computers and parents spend twice as much on ICT products for their sons as they do for their daughters. Likewise, girls in India are not encouraged to use technology even if it turns out to have a positive impact for them. It is because of a host of social, economic and attitudinal barriers. These barriers are based on the social set up of a society, and have a direct linkage with concepts like cultural norms, patriarchy and social institutions. Some of these are illustrated below in Fig. 1.

Sustainable Development Goals and Gender Equality

Earlier Millennium Development Goals (MDG) and now Sustainable Development Goals (SDG) have been formulated as a response to

problems in some of the important areas like health, sanitation, poverty and promoting gender equality. Gender equality is an important goal of the total seventeen goals made for achieving sustainable development and a prosperous world. SDG 5 has been drafted with an aim to achieve gender equality and promote empowerment of women and girls. Promoting gender equality has a direct effect on other development areas. The targets under this goal have been made to permeate in all spheres of her life. These start from ending discrimination of all forms with a focus on ending sexual violence, trafficking, access to reproductive health services, and equal opportunities for decision making. Several targets of other goals also address gender equality and can have a positive impact on promoting gender equality. The targets of goal 5 and other goals related to gender equality are depicted below in Fig 2.

Fig 1: Main areas of concern for women, which leads to Gender Digital Divide.
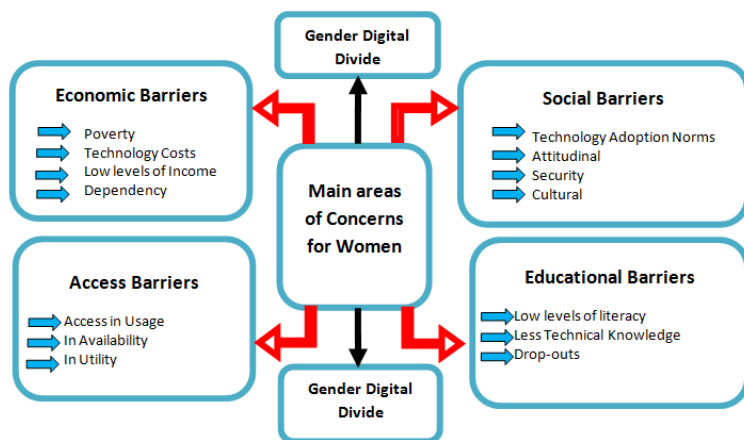

ICT and SDG5: Can they empower women and promote gender equality?

ICT has the capacity to completely redefine traditional gender roles, especially for women who have limited skills or who do not have the resources to invest in higher education **(Kelkar & Nathan, 2002)**. It enables meaningful participation and make female voices heard, as has been proved by the role of digital networks in feminist movements **(Harcourt, 1999)**. One of the targets of SDG5 is to *"Enhance the use of enabling technology, in particular information and communication technology, to promote the empowerment of* women". ICT can play a crucial role in the empowerment of women, thereby eventually transforming their lives, given their capacity to permeate in every sphere of life. Goal No. 5 of SDG and several targets of other goals which can

lead to gender equality can be achieved by proper usage of ICT, as these have been viewed as powerful and revolutionary tools that can be used for sustainable development of developing countries (**Daly, 2003**; **Huyer & Mitter, 2003**). But where actually can ICT work? The point of discussion here remains that where can ICT be used to promote the concept of gender equality. The targets can be many areas which will help in the empowerment of women and girls and thus creating the ground for sustainable development. Prior to realizing the goal of women empowerment, it is necessary to understand what leads to empowerment and gender equality. Keeping the already discussed models and definitions of empowerment in view, it can be assumed that; more opportunities of growth, increased sources of income, high levels of literacy, access to good health services, decision-making power and awareness about rights can help achieve some of the targets of SDG for promoting gender equality.

Fig 2: Targets of SDG's for gender equality.
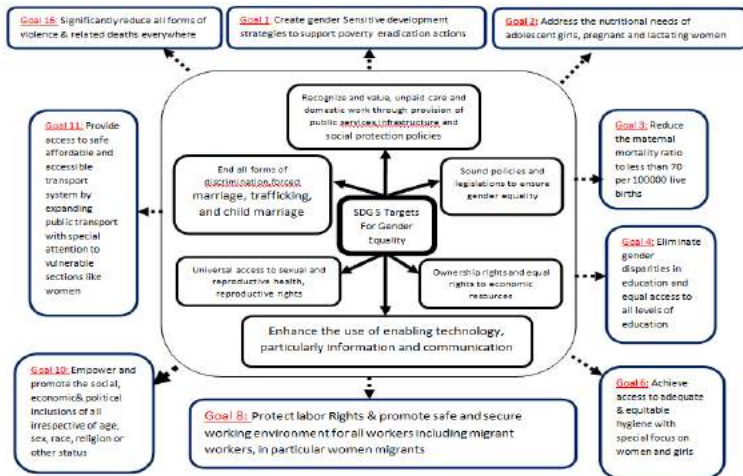
ICT in enabling more Livelihood Opportunities
The usage of ICT can enable working women to gain more economic benefits as they can get a direct linkage to market and surpass the male-dominated market structures. These can provide women entrepreneurs with access to worldwide e-business channels, which can be operated anytime from home (**Brodman & Berazneva, 2007; Morgan, Heeks & Arun, 2004**). Many authors have pointed out that the use of ICT can increase economic productivity (**Jorgenson & Stiroh, 2000; Oliner & Sichel, 2000; Pilat & Lee, 2001; Schreyer, 2000; Whelan, 2000**). The main

advantage of using ICT is the flow of information and knowledge that can be passed on, without the consideration of geographical limits. Geographical boundaries can be a great barrier which limits the participation of women in various activities. Overcoming these barriers is a great concern for women in India, and in such cases, telephones, computers and the Internet allow women to telecommute, and hence work and interact with men without face-to-face contact, and even without being in the same place **(Daly, 2003)**. They can easily share information, without meeting various costs. Hence, with the incorporation of technology and internet, women can be directly linked to the international buyers. There are various examples of how self-employed women in Cambodia, India and Peru have exploited various economic opportunities offered by e-commerce **(The World Bank, 2003)**.

Some Facts About Women and Livelihood
If women farmers had the same access to resources as men, the number of hungry in the world could be reduced by up to 150 million.
Four billion people do not use the Internet, and 90 per cent of them are from the developing world.
In developing countries, barely 30 per cent of agricultural production undergoes industrial processing. In high-income countries, 98 per cent is processed. This suggests that there are great opportunities for developing countries in agribusiness

Source: (United Nations Development Programme [UNDP], 2015).

Several projects have been started in various countries which can be replicated in the context fit for India to help women gain more profits from their ventures. PRODEMU, an NGO in Catamarca, Argentina have trained rural women to use ICT to improve the design and marketing of their goods. They were also encouraged to develop a webpage and improving the packaging, which increased their sales considerably **(Adam & Loregnard-Kasmally, 2002)**.

Another example is of "knitting together nations", a project jointly started by UNESCO, World Bank and United Nations High Commissioner for Refugees (UNHCR). Its aim is to create employment opportunities by providing craftswomen access to global market. Displaced women of Bosnia- Herzegovina sell their products globally through e-commerce **(Global Knowledge Partnership, 2003)**.

ICT for better Health
ICT can be used to create better health opportunities and initiatives for women. Information dissemination becomes quite easy with the help of technology. Providing better health care and services to everyone has been a target and aim of SDG with special focus on improving the reproductive, sexual health and creating awareness about reproductive

rights. The aim is also to reduce the maternal mortality and the spread of diseases like Tuberculosis, HIV/ AIDS, etc. With the integration of ICT into health care services, these targets can be achieved. There are various examples which have been started in places like Kenya, Africa, and Uganda wherein the integration of technology in the health care system has led to positive changes for women. A proper integration of technologies can directly address women's health concerns. These can be utilized in the better management and delivery of services at the institutional level, like maintaining of proper records which can directly benefit women. These are also used to aware women regarding health issues particularly related to their reproductive and sexual health. Radios have been used as a medium to disseminate information which can be of great help especially for pregnant women.

Some Facts About women and Their Health
Maternal mortality ratio – the proportion of mothers that do not survive childbirth compared to those who do – in developing regions is still 14 times higher than in the developed regions
Only half of women in developing regions receive the recommended amount of health care they need
The need for family planning is slowly being met for more women, but demand is increasing at a rapid pace
Globally, adolescent girls and young women face gender-based inequalities, exclusion, discrimination and violence, which put them at increased risk of acquiring HIV
HIV is the leading cause of death for women of reproductive age worldwide
In many settings, adolescent girls' right to privacy and bodily autonomy is not respected, as many report that their first sexual experience was forced

Source: (UNDP, 2015)

Various examples of improved access to health care services are proved by incorporation of technology into health sector. Recently Kenya has started a mobile wallet called as "*M-Tiba*" to make health care more accessible to people. A joint venture of *Safaricom, Carepay* and *Pharma access* has tapped the potential of a mobile phone to provide better health care. *M-Tiba* allows people to save, borrow, and share money for healthcare at very low costs. It also brings transparency and accountability to healthcare financing (for donors, government, insurers and corporate) and thus increases trust throughout the system **(Mobile Health Wallet, n.d.)**.

In Uganda, a project called RESCUER has been started by United Nations Population Fund (UNFPA), in collaboration with Uganda's Ministry of Health and Population Secretariat and Uganda district authorities, to reduce Uganda's high maternal mortality rate (506 per 100,000) by improving local care and referral systems. The project used means of communication like walkie-talkies. Also, high frequency radios were

installed at referral units, health units, ambulances which improved the quality of health care provided to a considerable level **(Sandys, 2005)**.

ICT in better Education Services

Gender disparity always leads to low literacy levels for females and high drop–out rates for girls. Continuing cultural and attitudinal challenges, domestic responsibilities and some socio-cultural practices steer away females from getting education. Cultural and attitudinal challenges are responsible for lack of family support to educate girls and perceptions on the role of women in society **(Huyer & Mitter, 2003)**. In some instances, mobility needs, can become a barrier for females. The flexibility related to access, study times and the potential to reach women in rural and far flung areas or to those women who face social barriers that may limit their access to schools, makes distance learning via ICT a promising educational approach for women **(Chen, 2004)**. A proper integration of technologies can be pivotal in addressing the education concerns of females. ICT can provide the content at the door step with the availability of technologies like internet, online classrooms, computers and e-learning centers. This can highly promote the education of girls. ICT can be strategically used to influence public opinion to change the prevalent cultural and attitudinal bias towards female education. Various examples have been put forth by many countries by using ICT for better education of girls.

An NGO *Tostan* in collaboration with UNICEF in 2009 started the *Tostan* and *Jokko* initiative in several African countries in which mobile phones were used as a tool to support literacy skills. Initially it was realized that the ability to communicate by text message was a motivating factor in encouraging literacy among people. The facilitators taught participants the uses of standard mobile phone functions and how SMS texting can be used as a tool to practice their literacy skills.

Some Facts About Education and Women
Children of educated mothers—even mothers with only primary schooling—are more likely to survive than children of mothers with no education.
103 million youth worldwide lack basic literacy skills, and more than 60 per cent of them are women
More than half of children that have not enrolled in school live in sub-Saharan Africa
Enrolment in primary education in developing countries has reached 91 per cent but 57 million children remain out of school
In sub-Saharan Africa, Oceania and Western Asia, girls still face barriers to entering both primary and secondary school.

Source: (UNDP, 2015)

ICT for creating Awareness

Currently there is a shift from the *Need Based Approach* to the *Rights Based Approach*. This approach shifts the paradigm from merely fulfilling the needs to recognize people as subjects of rights. Using a rights based approach can be an important tool for empowering women and promoting gender equality. The key player in achieving this goal remains the awareness about rights. Awareness about rights can lay foundation for empowerment of women and thereby achieving the goal of gender equality. Women cannot claim their rights if they are not aware about them. Right information at right time is pivotal in empowering women. ICT tools such as radio, television, mobile phone and internet can be used to create awareness regarding their rights and laws concerning them. ICT can be used to create awareness and disseminate information at two levels. At primary level, women can be made aware about their inherent human rights and the rights they have as state subjects. The information disseminated through the medium of radios, televisions or print media can have a long lasting impact on them. This can lead to increased chances of decision making that can shape their lives in a positive manner. The second level can be achieved by creating awareness at mass level. Raising awareness is necessary to change the perceptions and change the deep rooted bias prevalent in the society. An increased awareness of issues related to gender equality can be a positive tool to change the perceptions and attitudes of people towards women. Many countries have utilized the services of ICT tools to promote awareness among women as in Uganda, the Uganda Media Women's Association established a radio programme called *Mama FM*, where women can actively participate and learn about development issues such as human rights, child right, governance, nutrition, health, among others.

Conclusion

Following the line of discussion in this paper, it can be argued that gender equality forms the basis of sustainable development of any nation. Gender inequality has been viewed as a contemporary issue and has been echoed in various policy documents. The fifth goal of the SDG focuses directly on gender equality and empowerment of women. Empowered women and girls contribute to the growth and development of a nation, and create a positive effect that benefits everyone in a family and a community. Women Empowerment is an important means to promote the concept of gender equality and ICT is the key tool in achieving it. As discussed in the literature review, gender inequalities throw shadow on the usage of ICT for women, and eventually create a gender digital divide. This divide prevents women from using ICT tools, but once these services are made accessible, then these can be used to

promote gender equality. ICT has the potential to provide women with the opportunity to unlock their capabilities and pull themselves out from unfavorable conditions. It has the capacity to permeate into every aspect of life, and has been recognized as tool to enhance the quality of a woman's life. Improving the access to ICT can initiate a positive cycle of growth and development for women.

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