

## EMPOWERING WOMEN BY IMPROVING THEIR ACSESS TO INFORMATION AND COMMUNICATION TECHNOLOGIES

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**Abstract:** Information and Communication Technologies, which underwent a revolution with the introduction of the Internet in the late '90s, have had decentralizing effects across nations. As a result, in most developing countries, the weaker sections of society, such as women, despite the problems of poor working conditions, unequal wages as well as lack of access and training, the use of ICTs are contributing to economic development, combating poverty, fighting widespread gender disparity and increasing their participation and competitiveness in improving their overall status. By having access to the ICTs, women can explore, broadcast, and contribute more. They are also serving as a platform for community building and networking among women. Though researchers have also looked at the negative consequences and the greater digital divide, and over emphasized the role of Internet in development, extensive research has been done on how ICTs are addressing women's issues in aiding the development process and concerns including privacy and security. Now it is widely seen the presence of the Internet can be expected to transform politics and commerce, and will have a major impact on the conduct of government and economic affairs in developing countries.

**Key-Words:** Information and Communication Technologies, lack of access and training, gender disparity, developing countries.

**Introduction:** Over the past 4 decades, women have made notable changes in their labour force activities. Labor force participation is significantly higher among women today than it was in the 1970s, particularly among women with children, and a larger share of women are working full time and year round. In addition, women have increasingly attained higher levels of education: among women ages 25 to 64 who are in the labor force, the proportion with a college degree roughly tripled from 1970 to 2011. Women's earnings as a proportion of men's earnings also have grown over time. Madhya Pradesh has slightly better position in total female work participation rate 32.6%. Women of Madhya Pradesh has lowest rate of unemployment of 7.3%. In Madhya Pradesh the literacy rate is 78.4% in males and 59.8% in women and 39.9% of all enrolled **undergraduate students in Madhya Pradesh are women.** 40.5% of all enrolled PhD students are women. In 2014-2015 the percentage of women enrolled in specific undergraduate degree programs included .

- 20.5% Engineering/Technology
- 30.1% IT and Computer
- 23.6% Management
- 24.8% Law

In India, ICTs have been called the most potent democratizing tool that can put unequal human beings on an equal footing. The country is at a threshold of development and is rapidly moving towards e-governance with extensive investments in infrastructure. Women are actively being engaged in the process, and particularly in pioneering e-governance projects such as e-Seva in India. The project provides individuals with access to various C2C (citizen-to-citizen) and C2G (citizen-to-

government) services through the e-Seva *kendras* (centers) located at various places in urban and rural areas of the state. Coordinated efforts of government and private initiatives have enabled women to participate in the e-governance strategies through education, training and persuasion, where Internet is bringing in a slow and steady change in the lives of women. These e-Seva centers are small internet kiosks that are run and managed by the women self-help groups. This study examines the project and the involvement of women in working in the e-sewa centers, their roles and problems, and how they perceive change as they foray into the use of technologies toward their progress.

According to the report of the International Telecommunication Union (ITU, 2002) and the Status of Women Commission (2003), the world cannot eradicate poverty or create democratic and economically just societies, unless women gained full access to the information society. According to Brisco, gender-specific inequalities, lack of access to resources and high levels of illiteracy had deprived women of equal access to information and communication technologies. Denying women access to such technologies limited national production and barred nations from enjoying true competition in the global market. Under the agreed conclusions, increasing women's access to and participation in the media and ICTs was vital for women's empowerment. The report urged governments, United Nations bodies, international financial institutions and civil society to integrate gender perspectives and ensure women's full participation in national policies, legislation, programs, regulatory and technical instruments in

ICTs and media and communications. Along with policies, the economic empowerment of women has been recognized as a central tenet for improving the status and welfare of women. This is also important as women represent 40 % of the labour force in Asia and the Pacific and two fifth of the overall working populations. Therefore, women's participation in the Internet economy has to be increased at all levels of skills, from data entry to network management, to IT entrepreneurship. The shortage of qualified skills has offered women the chance to advance rapidly in the technology sector.

**Research Questions:** This study attempts to evaluate a major dimension of women's empowerment through the participation of women in the e-governance and e-Seva projects. It explores the challenges faced by women as information leaders, the direct impact as information providers for the customers/citizens and indirect social impact on the other women in their community. The specific objectives are:

1. To study the e-Seva project as one of the pioneer e-governance projects in Madhya Pradesh, India and the role of women in running the e-Seva centers.
2. To explore the profile of the women in e-Seva centers, their functions and use of ICTs as information providers, the problems faced by women and the levels of satisfaction achieved.
3. To broadly explore the extent to which working at the e-Seva centers is impacting the economic and social empowerment of women.
4. The impact on women in using new technologies and thereby the transformation process in improving their social status with the family and community.

#### Methodology

**Pilot Study:** The pilot study employed in-depth interviews with some women at e-Seva centers of Madhya Pradesh, and revealed interesting facts of how women are working at the e-Seva centers, as information providers are creating awareness on employment issues, training for jobs, aiding women in downloading forms and filling up applications. They were also providing extensive resource support by exploring government schemes/avenues for entrepreneurs. The data from these in-depth interviews and two focus group interviews with women helped in developing the variables for the questions in the survey.

**Methods Used:** The triangulation approach using Case study, intensive interviews and survey methods were employed to collect data for the study. The survey was conducted on a section of 150 women from e-Seva centers across four districts of Madhya Pradesh. Information for the case study of the e-Seva project was gathered from various primary and

secondary sources. Documented information from books and reports as well as from government officials and women working in e-Seva centers was collected. While the interviews with twenty women gave a deeper understanding of the personal circumstances of women and work, interviews with three officials of the project provided details of operations, the training of women in the multiple uses of the Internet and the government services to build information leadership and as a move towards women leading women.

A survey with mainly close ended questions was distributed to women working in e-Seva centers. This was administered by two field investigators who personally administered the questionnaires to the women across the two districts. Though the data on the exact number of women working differed, it is estimated that about 200-300 women work for e-Seva centers in the four districts of Shahdol division of Madhya Pradesh. A sample of at least a fourth of the estimated population is investigated for adequate representation for generalization to the entire population. About 15 centers were randomly selected and about 10 questionnaires were distributed at each of the centers. Though over 150 questionnaires were distributed, only 110 were complete in all respects, and constituted the sample for the study. Though ideally it would be best to collect the data through an online or email survey, it was not possible given the procedures for setting up the system for the same.

**Results:** The women work participation rate is very low in comparison to male counterpart for total, rural and urban population in India and Madhya Pradesh. In India, total women work participation rate is more than half of total male work participation rate and in urban areas of India it is less than a third.

#### Work participation rate of Women in India

Census Year	Total (%)	Rural(%)	Urban(%)
1981	19.8	23.2	8.3
1991	22.3	26.7	9.2
2001	25.6	30.8	11.9
2011	25.5	30.0	15.4

#### Work participation rate of Women in Madhya Pradesh

Census Year	Total (%)	Rural(%)	Urban(%)
1981	27.1	32.1	9.0
1991	29.6	36.1	9.7
2001	33.2	40.7	12.0
2011	32.6	39.3	15.1

Madhya Pradesh has been considered as Empowered Action Group States. The total, rural and urban work participation rate of women generally shows improvement between 2001 and 2011. All EAG states show increase in total work participation rate, except

for rural Madhya Pradesh. The study of total work participation rate of women of Madhya Pradesh, India shows declining trends during 2001-2011. This is reflected as appreciation in figures of marginal workers which show overall positive trends in the same period. In Census 2001 out of ten divisions, five divisions of Madhya Pradesh Shahdol, Ujjain, Indore, Jabalpur and Sagar have observed higher total and rural work participation rate than the state averages. Sagar division was top in urban work participation rate in Census 2001 and it has been replaced by Jabalpur division in 2011.

**Role of Women Power In IT Fields:** Employment and Corporate Bodies- Every second recruit entering the \$60 billion Indian IT industry is a woman. Currently, Infosys employs the largest percentage of women at 33.4%, followed by TCS 30% and Wipro 29%. The major players in IT industry are now offering an environment that will retain the talented women workforce. To develop women friendly work environment leading companies are now offering benefits like lactation centers, extra maternity leave, work from home policies, crèches, and option to relocate to city of their choice in case of transfer of the husband.

**Role of Government:** 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”.

The Public Service delivery is increasingly based on ICT tools worldwide. In all social sectors, worldwide trends are observed. Social schemes like poverty alleviation schemes and health related schemes are delivered by tagging them with ICT.

In the absence of a national e-governance policy, there is no document that provides a holistic vision of e-governance programming in India. On the whole, the broad agenda of 'social inclusion', identified by the Working Group on the Information Technology Sector in the Twelfth Plan seems to have informed the design of e-governance programmes. It is important to point out though the Working Group has identified e-learning and ICT skill development, development of rural connectivity infrastructure, development of local language content, ICT-enabled

health services and financial inclusion through ICT technology as key elements for utilising the ICT potential for social inclusion, it falls short of concrete suggestions on engendering these priority areas.

ICT possibilities to strengthen women's enterprises can be successful only as part of a sustained public policy effort that focuses on creating a supportive macro environment for women's enterprises as well as micro-level interventions for promoting an entrepreneurial culture among women.

**Challenges:** Firstly, formal education systems need to be restructured so that they can effectively enable girls and boys to acquire the ICT and information literacy, and digital skills for collaborative work, that are becoming increasingly important in the emergent knowledge economy<sup>125</sup>. Secondly, for the significant number of girls who are out of school, and the young women who have emerged from the formal schooling system with inadequate literacy skills<sup>126</sup>, the potential of digital technologies for promoting non-formal education and life-long learning, needs to be explored. The Women employees have to face challenges of long work hours, constant travelling and juggling different time zones of international clients, Social issues on account of working during night. Due to this the industry is losing women employees at the middle and senior management level. Women employees count less than 4% in top management of Infosys. The great challenge in India is the IT technology and internet connectivity in the distant villages. To capitalize on the opportunities for women empowerment provided by Information Technology it is important to increase internet connectivity in remote villages. These are the other challenges:

- Less support for women working in informal sector.
- Less awareness of ICT for women.
- Lack of e-commerce infrastructure in developing countries.
- Proper knowledge of English language.
- Male dominated set up of Indian society.
- Low Internet penetration among women: A meager 7% non-working women & 8% working women of India uses Internet, which is very low as compare to other advanced & developing economies.
- Conservative mindset for working women.
- Balancing career and family.

**Opportunities:** NASSCOM estimates that the male: female ratio in IT industry has improved from 72:24 in 2005 to 72:32 now. IT reduces the impact of barriers of time and distance in organizing and managing the service delivery of businesses. A large part of jobs outsourced are going to women. The freedom to work from anywhere and anytime can become a catalyst for financial independence and empowerment of women by enhancing their extra income. A women entrepreneurship cell should be set

up to handle the various problems of women entrepreneurs in all states at the college level.

#### **Promoting Women Entrepreneurship in IT:**

These women are the shining beacon of women entrepreneurship for their contemporaries & posterity. Apart from entrepreneurship other opportunities are:

- Choice of flexi timing & work place.
- Amiable working condition in IT companies.
- Better facilities for women to distance learning.
- Knowledge of various things through e-governance initiatives of government.
- Better market access for micro enterprises through e-commerce.
- Regulatory support by government to help microfinance and mobile banking for women empowerment.

**Strengths:** If India can increase women's labour force participation by 10 percentage points (68 million more women) by 2025, India could increase its GDP 16%. Abilities to learn quickly, their persuasiveness, open style of problem solving, willingness to take risk and challenges, motivating capacity, knowing how to win and lose ambivalently are the qualities that gild Indian women personality. Women hold only 7.7% of board seats and just 2.7% of board chairs. The industries with the highest percentage of women on

boards are technology, media, and telecommunications. Out of 323 total executive directorship positions (generally considered to be prerequisite to becoming CEO) on the Bombay Stock Exchange 100, just eight (2.5%) are held by women.

**Conclusion:** Breaking old traditional norms, women are showing their real potential and mental strength. They have infinite opportunities in this global arena. They share equal partnership in every business, government activities and jobs. Some age-old traditional barriers and societal attitudes must be removed for their upliftment. They have to demand for their rights and should be ready to take their fight of equity and honour to next level. As the industry is cognizant of women's role in ICT industry, there is a sea change to attract women employees. Balancing act of family and job related issues are making a dent in MMG and SMG level women in various companies. This can be a blessing in disguise as they can use their skill, knowledge and experience to become a successful entrepreneurs. Top level women employees are setting examples for younger generation. They have to walk a tightrope and make a fine balancing act to excel in their carrier in IT related fields. Above all they must get their share of support from their near and dear ones including family and colleagues.

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