Impact of Digitization on Women's Empowerment: A Study of Rural and Urban Regions in India

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Impact of Digitization on Women's Empowerment: A Study of Rural and Urban Regions in India

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Abstract

Women's empowerment plays a crucial role in the overall development of any society besides positively impacting the daily lives of women. The winds of radical change in the fields of employment and information technology have brought with them a wide range of opportunities for women in India and across the globe. The primary objective of this study is to find the usage of digitization in rural regions and urban regions by women. The study aims to perceive how basic internet centres and training should be provided for rural women to help them utilize the internet facilities. The "Internet Saathi" projects are identified as projects that impart training to rural women, but in reality, only 1 out of 10 rural women use the internet. Digitization, which is the primary focus of digital literacy, is the most essential skill required for the empowerment of women. The development of mobile technology has brought the world to one's fingertips and has allowed women to update themselves about everyday national and global news. Education not only enables rural women in digitization but also helps them to empower themselves economically. Towards this end, it would be advantageous for rural women to learn to use the internet via smartphones, carry out financial transactions online, and become aware of global trends.

Keywords: empowerment, digitization, women's empowerment, rural India, urban India

Introduction

Urban women have reached a specific level of self-reliance wherein their dependence on others has reduced over the years when compared to the state of rural women. This dependency level of the rural women in India has led to various issues such as their being misled and defrauded. According to a survey conducted by NSSO, rural women's literacy rate is significantly lower that of urban women. In addition to a better level of education, there is a large gap between urban women and rural women in terms of technology usage. After the onset of globalization in 1990, technology was initially a male-dominated field but with the increasing involvement of urban women over the years the usage of technology has increased among them. Despite the promises of the digital revolution, rural women still do not have the same access to information and technology, as urban women in India. Empowering rural women to help them get access to environmental, social and medical necessities, as well as education would enable

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them to make complete use of the "Digital India" scheme, which is known to aid women in their economic development. Digitization is to create a new opportunity to empower women to improve entrepreneurship opportunities using ICT (Rajahonka and Kaija, 2019). The empowerment of women can help to build their ability to get involved in decision making in a better way to effectively overcome in the era of social, political and economic obstacles as well as strengthening them to participate into the Digitization processes (Cummings and Tam O'Neil, 2015). Women can easily approach the job with confidence because IT women have employment options as flexibility and work at home concept (Malhotra, 2015).

Information Communication Technology

In a rapidly changing, technology-driven world, the lives of people are underscored by the internet and the gadgets with which they can access it. Technological innovations have transformed human life, leading to expansive changes, affecting society, and bringing economic growth. The economy of the nation is gaining huge profits through its contributions to the digital revolution. Though the nation has grown in digital literacy, women still face a wide range of difficulties in accessing technology and utilizing the internet. The social status and literacy level of women are the key factors that help to decide how technological advancement can help women achieve greater heights. However, it cannot be denied that rural women lag in their use of technology and the internet.

One of the significant issues with the utilization of technology is literacy, which is a barrier to its efficient use. There are many loopholes in the projects organized for rural women, yet there are a few remarkable accomplishments among the few rural women who have achieved great heights with the help of technology. According to a Notermans (2019), "Pooja", a rural woman, wanted to showcase her designing abilities, and she was helped to do so by using the internet. Women with such great ideas must be given opportunities to excel, which would make them exemplars for other rural women to improve their own digital literacy levels. ICT mainly focuses on empowering women through the use of basic techniques and delivers large amounts of information, but all this information is often not effectively used. This study reflects the considerable gap in the digital incentives available for urban and rural women that results in socio-economic disparities.

Rural Women in the Digital Era

Providing a platform for rural women to make use of technology and helping them to use mobile phones might help them break down the barriers they have faced over the decades. Finding the reasons for the disparity between rural and urban women is necessary to identify the facilities that require strengthening. In terms of internet usage, only 29% of women use the internet (Women, 2019). Until this percentage increases, India's goal of achieving a digital economy or improved digital literacy cannot be achieved within the expected timeframe as a significant strategy is lacking.

In the current scenario, 43% of men own cell phones, and women lag behind with only 28% mobile ownership. This distinction was assessed at 114 million. It is found that women never knew how to read or write the digits or identify any of the keys on mobile phones. They never knew how to read messages and were dependent on their husbands to use the device. Their cell phone usage was mostly limited to attending calls.

In urban areas, this gap between male and female users of mobile phones is quite low as there the percentage of literate women is much higher and exposure to advertising is greater resulting in fewer social barriers when compared to rural areas (Keeley, 2017). A vast number of new opportunities have arisen in the IT sector through the expansion of the digital economy. For the last few years, women's engagement in various institutions has increased tremendously, and the outsourcing of business activities has created new jobs in IT industries, many of which have been secured by women. However, the study shows that women are deprived of various managerial and professional skills, which leads to their being dominated by men, and forced do the routine work. Nevertheless, for Indian women, new employment opportunities are being created through new platforms and the shared economy permits them to circumvent physical mobility barriers and balance work and home commitments. This economy creates employment opportunities without any social discrimination. It can be used for both uplifting women and for balancing the economy of the country at large.

Research Methodology
Research Objectives
- To understand how rural women utilize digital and communication technologies in the Indian context.
- To identify whether the usage of digital technologies among rural women is related to education, age, marital status and employment status.

Research Hypothesis
This study was experimental with the following hypothesis
- H_0: Rural women in India are not familiar with technology and digitization in India.
- H_1: Rural women in India are familiar with technology and digitization in India.

Sampling Methodology
Random data was collected based on the usage of technology in both rural and urban areas. Based on the criteria for the aspect of analyzing the usage of technology, five attributes like online transactions (shopping bills, electric bills), entertainment (movie tickets), online communication, social networking, and online service are considered. The questionnaire was collected and the data analysed verified the facts given in various survey reports about the usage of technology by rural women in India. Data from a sample size of 200 was collected.

Sampling Details
The main focus is on rural women in India, among all the age groups. Sample data were analyzed using the R software with the help of K-means clustering to find the exact areas in which the rural women are lacking, and the result is shown in a graph. After performing the K-means algorithm, the different attributes required by rural women were identified. K-means clustering can be classified into two groups, that is rural and urban. Each group is assigned by the mean value of points in the group, known as the cluster centroid. The result is based on clustering vector, a sum of squares and available component are calculated in the cluster using K – means algorithm.

From the below plot, it can be observed that rural women are experiencing a technology barrier with regards to online communication, entertainment, social networking, online transactions, and other online services compared to urban women. Out of 60 rural women, only 20 rural women have used technology.
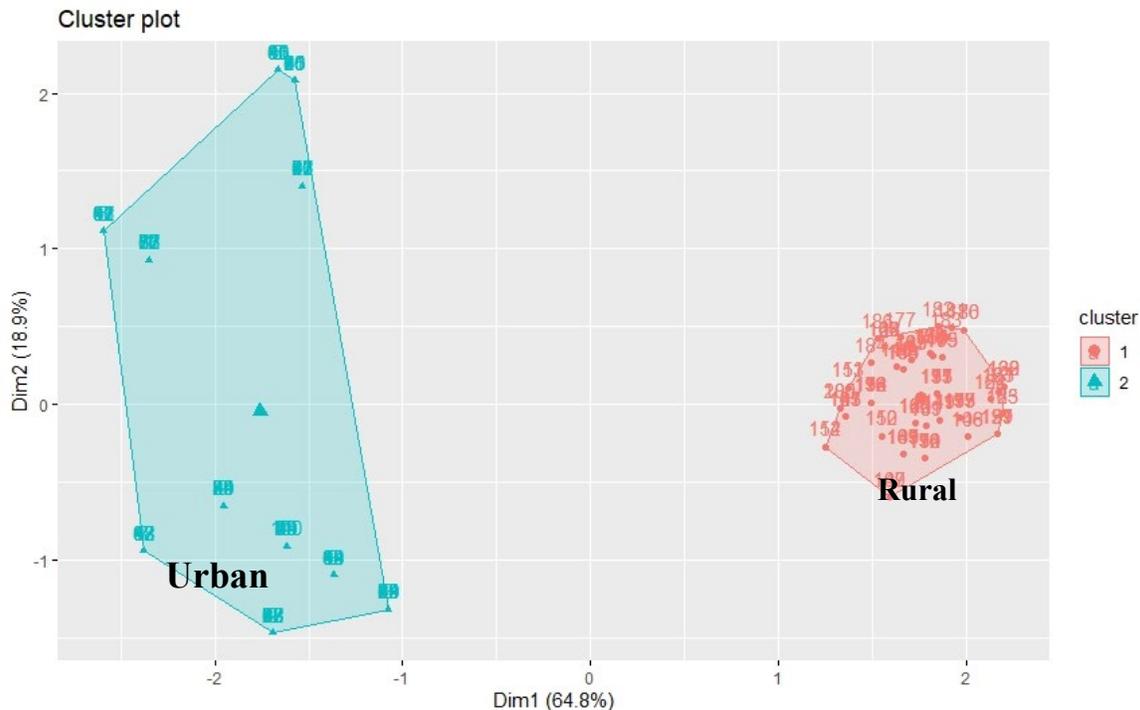
**Figure 1: Graphical represents both rural and urban women**

Analysis and Interpretation

The analysis of the data was completed and the pictorial graph from the data is drawn. The following bar chart depicts that urban women are engaged with digital technology to satisfy their day to day necessary needs. Whereas, rural women are lagging very much behind in technology with a lack of education and other facilities.

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[4]The aims that are followed by the ICT to achieve gender equality and empower all the women in the country and the efforts taken to call the women across the nation to use the advanced technology["Gender and Information and Communication Technologies [ICT]: A Comparative Analysis of Three Cases in India," Journal of Asian Women's Studies, Vol 14]

[5]Understanding the role that ICT has taken for the empowerment of the women based in the field of technology. Moreover, a brief understanding of the various programs taken, [Empowering Women Through ICT-Based Business Initiatives: An Overview of Best Practices in E-Commerce/E-Retailing Projects. Information Technologies and

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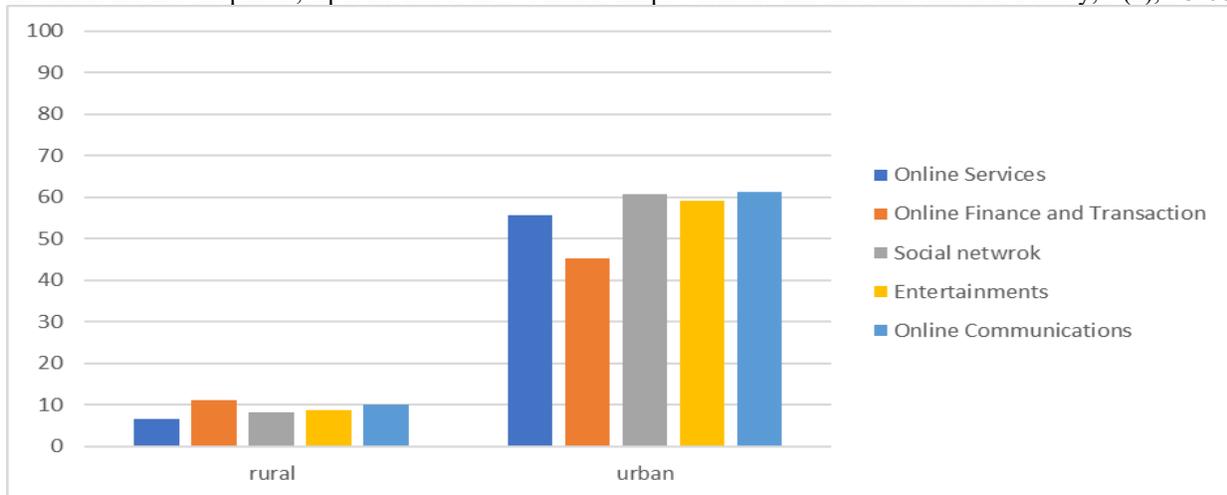
Figure II: Comparison of rural women and urban women using digital technology

Conclusion

Technology-oriented programs are being conducted in rural India for the benefit of women, but the projects are not successful because of the lack of equipment provided to the women. However, the policies of ICT are focused on bringing greater benefits to women. More online and offline jobs must be provided to women so that they grow stronger economically. It must be understood that exposure to technology will in itself empower women. This has ensured that more programs linked to technology are required and should be organized. Familiarity with computers and other technical devices not only makes women technologically literate but also enables them to become economically stable. Digitalization makes them economically stronger and stable; it helps them become technically savvy individuals. Promoting digitization among women can also empower them. The arrival of digital payment modes allows women to make efficient payments without getting cheated by any sort of fraudulence. A comparative study could be undertaken with the help of different analysis algorithms to gauge the success of such digitalisation initiatives based on their performance. Digital literacy helps rural women to become digitally proficient and also helps them to become economically independent.

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