

Role of HDI in Capacity Building of Rural Female for Empowerment (A Spatial Study of Rajasthan, India)

Renu Poonia¹ & Dr. Madhu Singh²

¹Lecturer, SPC Govt. College, Ajmer (Raj.)

²Lecturer, Govt. College, Jayal, (Raj.)

Abstract:-Rural women are the key agents for achieving the transformational economic, environmental and social changes required for sustainable development. But limited access to credit, health care and education are among the many challenges they face, which are further aggravated by the global food and economic crises and climate change. Since the rural India is in its early stage of development then this paper has a great relevance showing the importance of rural women empowerment for the inclusive regional sustainable development. The paper deals with especially two components- one is district wise Female Work Participation Rate in Rural Rajasthan (FWPR) and HDI of that particular district. The district wise impact was calculated through one of the best statistical technique i.e. Regression Residual Method. Beyond data and calculations some other feature like the trends and triggers of empowerment, barriers in development, suggestions to remove barriers and to enhance rural women empowerment were also discussed here. As a result it was found that the launching agents in the empowerment of rural women are the capacity building and their potential enhancement.

1. Introduction

Female is a pivot of a family and it comprises almost 50% of the total population; with such an intense and vital position how is it possible to rule out its empowered presence for the success of any policy of human welfare. UN Secretary General Ban Ki moon expressed his views on the eve of International Women's Day in highlighting the potential of rural women to improve the well-being of entire societies if given equal access to resources and set free from the discrimination and exploitation that hold them back. He acknowledged that women are increasingly exercising greater influence in business, government, politics, public administration and other professions. Also, more girls are going to school and are growing up healthier and better equipped to realize their potential. "But, despite this momentum, there is a

long way to go before women and girls can be said to enjoy the fundamental rights, freedom and dignity that are their birthright and that will guarantee their well-being," said the Secretary-General. Rural women and girls make up a quarter of the global population, yet they routinely figure at the bottom of every economic, social and political indicator, from income, education and health to participation in decision-making, Mr. Ban said. They perform most of the unpaid care work in rural areas and are a major part of the agricultural labour force, making up almost half a billion small holder farmers and landless workers.

Regarding the above statements, it is clear that rural empowerment can be possible only after the empowerment of rural female. So, in this paper emphasis was given on this point of view that policies and programmes should be prepared in such a manner, through which it is to be ensured that the rural women of the country are not only empowered but also become active participants in the development process of the country. Keeping in mind that women's political participation is a fundamental prerequisite for gender equality in any region and across the world, some required aspects of respectful life and their participation, were also included as a study area in this paper. To empower rural women it is very much essential to aware them, to educate them and to capable them for participating in decision makings. All the areas of lacking and lagging in women empowerment have been identified and solutions for their removal or at least minimization were also an important part of this study. National and international efforts towards empowerment were also keep in mind and mentioned here to get true picture of this phenomenon as a whole. As a result it was found that the booster agents in the empowerment of rural women are the capacity building and their potential enhancement. Rural women are key agents for achieving the transformational economic, environmental and social changes required for sustainable development. No enduring solution to the major global challenges from climate change to political and economic instability can be solved without the full empowerment and participation of

women across the world as well as in rural areas also. But limited access to credit, health care and education are among the many challenges they face, which are further aggravated by the global food and economic crises and climate change. Empowering them is the key not only to the well-being of individuals, families and rural communities, but also to overall economic productivity, given women's large presence in the agricultural workforce worldwide. Since the rural India is in its early stage of development then this paper has a great relevance showing the importance of rural women empowerment for the inclusive regional sustainable development. The paper deals with especially two components- one is Female Work Participation Rate in Rural Rajasthan (FWPR) and HDI of that particular district. The impact of different FWPR on the HDI of any region is the base of this study.

2. Objective

This study has been run by some objectives, as follows:-

- To assess the impact of Human Development Index on the Rural Female Work Participation Rate.
- To analyze the above assessed data district wise.
- To find barriers and boosters for rural female empowerment.

3. Hypothesis

Three hypotheses were assumed; one is the main while two are the subsidiaries. As follows:-

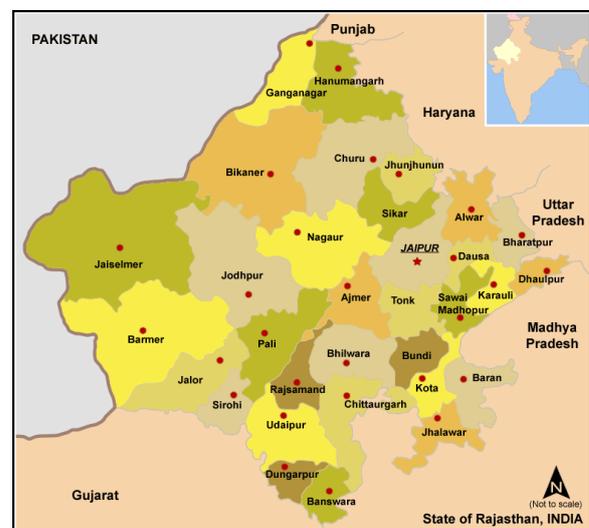
- There must be strong correlation between these two attributes- HDI and FWPR
- Districts with positive correlation means education, health and employment should be the core sector to empower that rural area and
- The districts with negative correlation means HDI factor is not working and focus should be given on some other sectors like socio-cultural, economic, infrastructural, political etc.

4. Study area

The largest state of India which is full of versatility and variability of geography has been chosen for this study. It is located in the western part of India sharing 1070 km international border with Pakistan. It spreads between 23°03'30" to 30°11'54" north latitudes and 69°29'05" to 78°16'24" east longitudes having an area of 3,42,239 square kilometers, consisting a Quadra

shaped state with 834 north-south and 890 east-west extension. The study area is shown in Map1. The western part of the state is made up of Thar Desert which is full of sand dunes, the central part is made up of pre- Cambrian Arawali mountain range, the eastern part is consisted by fertile river basin while the east most and south east part is the remnants of vindhayan rocky plateau region. The climate is arid i.e. hot and dry. Average temperature in summers goes beyond 42°C while in winters comes as down as 9°C. Average annual rainfall is not more than 55 cm which have a great variation from east to west.

Map 1. Rajasthan with its District Boundaries



Since the paper deals with the impact of HDI on Female Work Participation Rate, so we must know the State's position in some attributes in India. Rajasthan stands at first position in size having total population of 6.85 crores, sex ratio 914 with 75.1% of Rural Population which is composed by 75.3% female in rural area. Total female literacy is 52.1 % in which 70.7% female in urban and 45.8% female in rural Rajasthan are literate. Average Female work participation rate in urban area is 12.0% while 42.7% in rural Rajasthan. Rajasthan stands at seventeenth position in India with 0.434 HDI value.

5. Methodology

While dealing with such a huge state which is having remarkable spatial disparity in development level, it is essential to be careful while selecting indicators to full fill the objectives and the perfect tool for their assessment.

Tools:- Here in this paper to analyse the Rural Empowerment district wise Status in the state, two indicators has been selected:-

- **Female Work Participation Rate (FWPR):-** means Percentage of female involved in paid works to the total number of female in that particular district. It has been chosen as a true representative of area's Economic, Socio-Cultural and infrastructural growth and the effect of Human Development Index on this participation rate. And
- **Human Development Index (HDI):-** It encompasses statistics such as Life Expectancy at birth, an Education index (calculated using mean years of schooling and expected years of schooling), and Gross National Income per capita.

In this paper an effort has been made to find the impact of HDI on the FWPR district wise, so that districts of different degree impact can be identified which can be kept in mind while preparing plan for further development.

Technique:-The relation between these two attributes can be easily found out by any correlation technique but we want the different category of impact so the Regression Residual Method was selected which gives us six different levels of relation between two variables. This study is a combination of analysis and assessments. It can be divided into two major parts. Part one is analytical by nature comprising secondary data and many statistical techniques. While second half is subjective in nature comprising observations and explanations with facts. This study is based on Secondary Data published by Census Department of Government of India for all districts individually. Two techniques are applied in it:-

- To get different categories of impact, **Regression Residual Method** was selected which gives us six different levels of relationship between two variables.
- To find the correlation between these two attributes for all districts as a whole, **Pearson's Product Moment Correlation Technique** was selected for more accuracy.
- Steps for calculations of Impact of HDI on FWPR are as follows:-

- I. Regression equation for Y series on X series was obtained by Regression Coefficient Method by applying the following formula:-

$$y - \bar{y} = \{(\sum d_x d_y) / \sum d_x^2\} (x - \bar{x})$$

Through this equation we got the y value for each district with respect of each x, denoted as Yc.

- II. Standard Error of Estimate of Regression Residual for each district were calculated by applying the following formula:-

$$S_{yx} = \sqrt{\sum (y - Y_c)^2 / N}$$

Where y = HDI values of particular district

Yc = values find from regression equation for the same district

N = number of variables

- III. After getting the Standard Error of Estimate of Regression Residual (S_{yx}), six categories were prepared on the basis of following table:

Table 1. Category Name as Per Value Range of Standard Error of Estimate of Regression Residual		
S.No.	Value range	Category Name
1.	$\bar{y} + 2 S_{yx}$ to $\bar{y} + 3 S_{yx}$	Very High Positive Correlation
2.	$\bar{y} + 1 S_{yx}$ to $\bar{y} + 2 S_{yx}$	High Positive
3.	\bar{y} to $\bar{y} + 1 S_{yx}$	Medium Positive
4.	$\bar{y} - 1 S_{yx}$ to \bar{y}	Medium Negative
5.	$\bar{y} - 2 S_{yx}$ to $\bar{y} - 1 S_{yx}$	High Negative
6.	$\bar{y} - 3 S_{yx}$ to $\bar{y} - 3 S_{yx}$	Very High Negative

- IV. **Impact analysis of HDI on Rural Female work Participation Rate:-** The district wise data sheet of HDI and FWPR is as follows:-

Table 2. Raw Data Sheet of FWPR and HDI of Each District			
S.No.	District	Female Work Participation Rate 2011 (X-Series)	HDI 2007 (Y-Series)
1.	Ajmer	29.2	0.677
2.	Alwar	41.17	0.744
3.	Baran	37.84	0.653
4.	Banswara	48.82	0.425
5.	Barmer	41	0.578
6.	Bharatpur	35.54	0.604
7.	Bhilwara	39.87	0.633
8.	Bikaner	30.77	0.779
9.	Bundi	39.59	0.649
10.	Chittorgarh	45.47	0.558

11.	Churu	36.58	0.606
12.	Dausa	36.87	0.576
13.	Dhaulpur	33.3	0.497
14.	Dungarpur	42.61	0.409
15.	Hanumangarh	38.23	0.761
16.	Jaipur	23.75	0.778
17.	Jaisalmer	34.5	0.673
18.	Jalore	45.03	0.527
19.	Jhalawar	41.27	0.614
20.	Jodhpur	29.75	0.686
21.	Jhunjhunu	33.93	0.711
22.	Karoli	38.2	0.566
23.	Kota	23.03	0.787
24.	Nagaur	50.95	0.61
25.	Pali	31.54	0.547
26.	Rajsamand	40.21	0.578
27.	Sikar	26.77	0.698
28.	Sirohi	29.4	0.645
29.	Sri Ganganagar	24.96	0.809
30.	Swaimadhampur	37.1	0.561
31.	Tonk	40.01	0.571
32.	Udaipur	35.29	0.595

29.	Sri Ganganagar	24.96	0.809	0.73063
30.	Swaimadhampur	37.1	0.561	0.62137
31.	Tonk	40.01	0.571	0.59518
32.	Udaipur	35.29	0.595	0.63766

- **Step II:-** To get Standard Error of Estimate of Regression Residual for each district applying the above stated formula and finally get the six categories of Standard Error of Estimate of Regression Residual (S_{yx}) which is shown in Map2.

S.No.	Value Range	Districts
1	0.779-0.854	Nil
2	0.704-0.779	Jaipur, Kota, Sikar, Sri Ganganagar
3	0.628-0.704	Ajmer, Bharatpur, Bikaner, Dholpur, Jaisalmer, Jhunjhunu, Jodhpur, Pali, Sirohi, Udaipur
4	0.553-0.628	Alwar, Barmer, Baran, Bhilwara, Bundi, Dausa, Dungarpur, Hanumangarh, Jhalawar, Karoli, Rajsamand, SwaiMadhopur, Tonk
5	0.478-0.553	Banswara, Chittorgarh, Jalore, Nagaur
6	0.403-0.478	Nil

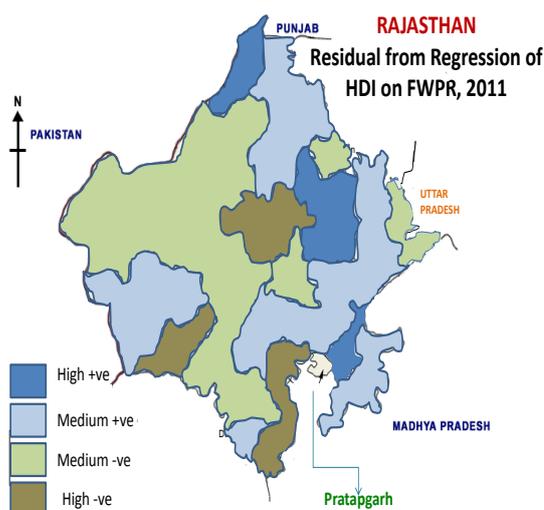
6.Findings:-

Results as per eachsteps are as follows:-

- **Step I**

S.No.	District	(X) FWPR 2011	(Y) HDI 2007	Y_c
1.	Ajmer	29.2	0.677	0.69247
2.	Alwar	41.17	0.744	0.58474
3.	Baran	37.84	0.653	0.61471
4.	Banswara	48.82	0.425	0.51589
5.	Barmer	41	0.578	0.58627
6.	Bharatpur	35.54	0.604	0.63541
7.	Bhilwara	39.87	0.633	0.59644
8.	Bikaner	30.77	0.779	0.67834
9.	Bundi	39.59	0.649	0.59896
10.	Chittorgarh	45.47	0.558	0.54604
11.	Churu	36.58	0.606	0.62605
12.	Dausa	36.87	0.576	0.62344
13.	Dhaulpur	33.3	0.497	0.65557
14.	Dungarpur	42.61	0.409	0.57178
15.	Hanumangarh	38.23	0.761	0.6112
16.	Jaipur	23.75	0.778	0.74152
17.	Jaisalmer	34.5	0.673	0.64477
18.	Jalore	45.03	0.527	0.55
19.	Jhalawar	41.27	0.614	0.58384
20.	Jodhpur	29.75	0.686	0.68752
21.	Jhunjhunu	33.93	0.711	0.6499
22.	Karoli	38.2	0.566	0.61147
23.	Kota	23.03	0.787	0.748
24.	Nagaur	50.95	0.61	0.49672
25.	Pali	31.54	0.547	0.67141
26.	Rajsamand	40.21	0.578	0.59338
27.	Sikar	26.77	0.698	0.71434
28.	Sirohi	29.4	0.645	0.69067

Map 2. Districts as par Categories of Standard Error of Estimate of Regression Residual (S_{yx})



- **Step III:-** The Pearson Product moment correlation co-efficient of HDI and FWPR for all 32 Districts of Rajasthan is **-0.63779**.

7. Assessment

After thorough and rigorous analysis of data sheet and field visits two things become very clear-

First- There is a medium negative correlation between HDI and FWPR and

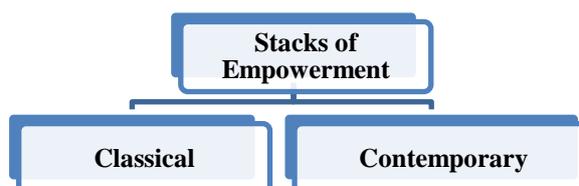
Second- Most of the districts scores medium value of Standard Error of Estimate of Regression Residual (S_{yx}).

These two results push to reach on this decision that solely the HDI factor is not sufficient for the women empowerment.

Rural women are key agents for achieving the transformational economic, environmental and social changes required for sustainable development. But limited access to credit, health care and education are among the many challenges they face, which are further aggravated by the global food and economic crises and climate change. Empowering them is the key not only to the well-being of individuals, families and rural communities, but also to overall economic productivity, given women's large presence in the agricultural workforce worldwide.

8. Stacks of Empowerment

Rural women are active agents of economic and social change and environmental protection who are, in many ways and to various degrees, constrained in their roles as farmers, producers, investors, caregivers and consumers. They play crucial roles ensuring food and nutrition security, eradicating rural poverty and improving the well-being of their families yet continue to face serious challenges as a result of gender-based stereotypes and discrimination that deny them equitable access to opportunities, resources, assets and services. When we are talking about rural empowerment, we are automatically thinking about rural women. So to empower rural area, we must know the pillars of the empowerment. Here in this study these pillars are referred as Stacks.



1. **Classical Stacks:-** These can be known as traditional pillars comprising three sectors; Education, Health and Earning. During this

study it was found that if these are sufficient pillars than why HDI does not show a strong positive correlation with FWPR. Means the new contemporary stacks plays an active role for the empowerment of Rural Women.

2. **Contemporary Stacks:-** Though the basic elements of HDI is important for development but solely these are not sufficient for empowerment of the rural women. Following are the list of new stacks of empowerment:-

- **Education Training and Information**

Rural women's access to education and training can have a major impact on their potential to access and benefit from income-generating opportunities and improve their overall well-being. A variety of approaches, including non-formal education, technical and vocational training, agricultural extension services, workplace training, training in new technologies and literacy and numeracy training are needed to address the various challenges rural women face. In addition, information and communication technologies (including mobile and electronic communication, etc.), supported by the right policies and institutional frameworks, can provide rural women with alternative avenues to access information related to their rights, services and resources, and social protection (e.g. identification card registration; laws on land, inheritance, and domestic/gender-based violence; and agriculture, market, health, nutrition information.

- **Health**

Rural women encounter numerous constraints in accessing affordable, adequate health services in rural areas (e.g. clinics, hospitals, reproductive health/family planning and counseling). This includes affordability, restrictions on their mobility, and a lack access to transport or means for contacting transport (e.g. cell phone). Holistic health services that address the physical, as well as mental and emotional well-being of rural women (e.g. responding to gender-based violence) are needed in rural areas.

WHO has a gender-based approach to public health, which addresses the specific health vulnerabilities and risks of rural women and girls. Other agencies also contribute to the goals of improved health and overall well-being for rural women through advocating for social protection, decent work and elimination of child labour. UNFPA does in-depth work on reproductive rights and sexual and reproductive health. It works with the H4+ development partners to improve development effectiveness in health systems, and with

national and civil society partners to increase gender responsive training.

- **Access to Productive Resources, Assets, Services and Infrastructure**

Women face gender disparities in access to and control over land, as well as a lack of access to other productive resources and services. Legislation and policies, decentralized administrative and institutional capacities and public awareness campaigns need to assert, protect and enhance rural women's rights to land and property. Constraints to women's access to financial services (credit, savings and loans, insurance, etc.) include policy and legal barriers as well as cultural norms that prevent women from developing and growing enterprises, improving productivity, keeping bank accounts or entering into contracts without their husbands or another man. Women's lack of ownership over assets that can be used as collateral to leverage loans also constrains them more than men. To ensure women's improved access to, and benefit from both local and export markets, financial services that target women must be linked to a wider policy framework that ensures rural women's access to financial services and contributes to the development and expansion of markets and value chains. In the context of limited or nonexistent infrastructure, rural women spend an enormous amount of time and energy accessing water and fuel wood for domestic and agricultural use, preparing food, carrying produce and goods to and from markets on their own backs and caring for children. Rural infrastructure programmes can enhance women's participation and benefits – as workers during construction and as beneficiaries of the asset(s) created – yet women are seldom included in the design of such programmes.

- **Food Security**

Food security is defined as having four main components: availability, access, utilization, and stability. Women play key roles in maintaining all four pillars of food security: as food producers and agricultural entrepreneurs; "gatekeepers" who dedicate their own time, income and decision-making to maintain food and nutritional security of their households and communities; and "managers" of the stability of food supplies in times of economic hardship.

In many countries women supply most of the labour needed to produce food crops and often control the use and sale of food produce grown on plots they manage. However, the gender disparities in ownership of, access to and

control of livelihood assets (such as land, water, energy, credit, knowledge, and labour) negatively affect women's food production. For instance, compromised land access often means that women obtain lower yields than would otherwise be possible if household resources were allocated more equitably. Insecurity of tenure for women thus compromises their production potential and increases food insecurity. Greater food security would be achieved if women had access to needed assets and resources and had a voice in the decisions that have an impact on the lives of their households and communities.

A significant proportion of women are working in informal non-agricultural sectors, like trading and small-scale processing, which both contributes to the food value chain and generates income for them to purchase food. However, rural women often face constraints to market engagement due to factors such as lack of mobility, capacity, and technical skills. Likewise, women food crop entrepreneurs can play important economic roles that have positive effects beyond the micro level (e.g. supplying food products and employment opportunities), but are often hindered by discriminatory practices and stereotypical attitudes from accessing opportunities to expand their businesses. Improving women farmers' participation in marketing chains and entrepreneurial activities – e.g., by investment in transport and infrastructure, improved provision of training and information, or changes in policy and regulatory frameworks – would mean giving a boost to aggregate food security.

UN's FAO supports rural women's involvement in global governance for food security through the Committee on Food Security and its work on the right to food. Other notable FAO initiatives include policy and technical assistance to stimulate gender equitable food security and agricultural policies, productive employment and decent work opportunities for rural women; support to initiatives designed to strengthen rural women's capacity to organize themselves, form associations and act collectively for their common interests; and a range of research and policy initiatives geared towards making rural development interventions — including food security and agricultural intensification programmes, agricultural extension schemes, technology and infrastructure innovations, agriculture-related investments, and trade and market regulations — work better for rural women.

- **Social Protection**

Access to adequate social protection is recognized as a basic right essential for ensuring widespread human welfare. It is also central to contributing to an enabling environment for growth, social stability and economic performance. Yet, poor rural women often lack information about, or access to social services (e.g. cash transfers, maternal protection, social security pensions, unemployment benefits, etc.) or even basic identification documents that could help them access such services.

- **Decent Work**

Agricultural and rural non-farm employment plays a critical role in rural development, food security, poverty reduction and rural women's economic empowerment. Yet, in many rural areas, work as unpaid contributing family members and agricultural wage labour is often the only employment option available to poor rural women. Efforts to create more and better jobs for rural women through promoting gender equitable enforcement of labour standards; eliminating discrimination against women in rural labour markets and supporting their access to fair wages and better jobs; improving occupational safety and health and social protection, and strengthening rural women's voice in social dialogue with governments, employers and workers are crucial in efforts to strengthen rural women's economic empowerment.

- **Equal Participation of Rural Women in Decision-making**

Efforts to achieving the Millennium Development Goals will not be credible without the full and equal participation of rural women in decision-making. Enhancing rural women's leadership and meaningful participation in all forms of decision-making, from Parliaments to local governments and civil organizations, will ensure more attention is paid to meeting the needs of women and girls. For most poor people, local governments are the most important political arena.

UNDP supports governments to establish institutional frameworks for the participation of the poorest and most marginalized women. UNDP also advocates for and promotes women's political empowerment, by helping to reform electoral processes, change political parties, and strengthen parliaments, judiciaries and the civil service. UNFPA uses participatory approaches and works with rural communities to eliminate socio-cultural constraints to women's participation in decision-making on issues of sexual and

reproductive health and harmful practices such as Female Genital Mutilation/Cutting and child marriage. IFAD, through the use of quotas and capacity building, promotes and strengthens women's participation, both as members and leaders, of project-related decision making bodies as well as producer organizations. UN Women supports regular consultations between key partners such as Women's Parliamentary Group of East Timor and local elected women leaders to discuss issues and challenges facing rural women and how parliamentarians can work to progress rural women's agendas in Timor Leste.

- **Information and Communications Technologies**

Information and Communications Technologies (ICTs) are increasingly shaping our world, understandings, interactions and political, social and economic orders. Women's full participation in the information society is thus a 21st century imperative. The beneficial applications of ICTs for women are many and cut across all dimensions of life, livelihoods and citizenship. Enormous opportunities for application of technology are available to meet women's education and economic needs and engagement. It has been predicted that 90% of future formal sector jobs will require ICT skills.

- **Education:** ICTs can enhance quality of education and its accessibility for young women and provide lifelong learning for women of all ages. This cuts across administration of education systems, teacher training, flexible and broader-based educational opportunities, introduction of new pedagogies and learning models, access to and creation of local educational content, learning networks, and the like. All of this can support a more gender responsive educational system. Also critical when looking at the education system is the promotion of ICTs skills within schools as a basic 21st century literacy – ensuring that girls participate - and ensuring that girls and young women are also entering technology (and other STEM) studies.
- **Women's economic empowerment:** ICTs have been effectively applied in many different areas, ranging from women's innovation, entrepreneurship and business development, to e-financing and skills development for formal employment. ICTs have been used for learning, training, advocacy, networking and building coalitions around economic policy issues. Other less known areas in which ICTs have been applied to support women's economic

empowerment include support to women migrants, natural resource management and land rights. The ICT sector represents incredible employment and leadership opportunities for women whether in the private sector—as entrepreneurs and business leaders—public sector—in ministries of ICT, education and economic development—or academia. Efforts need to be made to recruit, retain and promote qualified women in the ICT workforce. Today, women are already active in the start-up ecosystem, on company boards and as influencers of ICT investments, policy and regulations. However, the numbers are still too small.

- **Risks:** Risks and concerns raised in relation to ICTs include: privacy, security, threats around reinforcing stereotypes and harmful practices being replicated or facilitated online. The gender gaps in ICT access, use and development also need to be addressed. Therefore, the broader governance, policy and regulatory issues along with basic digital citizenship skills need to be addressed.

9. Conclusion

The importance of role of females in development can not be denied. This study reveals that female has its impact in each and every aspect of society then how it can be stayed ignored. One thing is clear about the female's work participation that it is not dependent on their formal Education, Health and economic status despite they work when they have something different from just above HDI factors. To empower rural women, we must provide them freedom from all social and technical bounds. We must change our perspective regarding their capabilities. Capacity Building through freedom is the sole tool of empowerment of rural women.

10. Reference

1. Acharya, Sanjaya, et al. "Empowering rural women through a community development approach in Nepal." *Community Development Journal* 42.1 (2007): 34-46.
2. Duflo, Esther. "Women empowerment and economic development." *Journal of Economic Literature* 50.4 (2012): 1051-1079.
3. Hashemi, Syed M., Sidney Ruth Schuler, and Ann P. Riley. "Rural credit programs and women's empowerment in Bangladesh." *World development* 24.4 (1996): 635-653.
4. Jayaweera, Swarna. "Women, education and empowerment in Asia." *Gender and Education* 9.4 (1997): 411-424.
5. Kabeer, Naila. "Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1." *Gender & Development* 13.1 (2005): 13-24.
6. Mahmud, Simeen, Nirali M. Shah, and Stan Becker. "Measurement of women's empowerment in rural Bangladesh." *World development* 40.3 (2012): 610-619.
7. Malhotra, Anju, and Sidney Ruth Schuler. "Women's empowerment as a variable in international development." *Measuring empowerment: Cross-disciplinary perspectives* (2005): 71-88.
8. Mehra, Rekha. "Women, empowerment, and economic development." *The Annals of the American Academy of Political and Social Science* (1997): 136-149.
9. Pankaj, Ashok, and Rukmini Tankha. "Empowerment effects of the NREGS on women workers: a study in four states." *Economic and Political Weekly* (2010): 45-55.
10. Presser, Harriet, and Gita Sen. *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford University Press, 2000.
11. Roy, Sanchari. "Female empowerment through inheritance rights: evidence from India." *London School of Economics, London* (2008).
12. Sakuntala, Narasimhan. "Empowering women: an alternative strategy from rural India." *Empowering women: an alternative strategy from rural India* (1999).
13. Sen, Amartya. "The living standard." *Oxford Economic Papers* 36 (1984): 74-90.
14. Thakur, Ram Naresh. "Rural women empowerment in India." *Empowerment of Rural Women in India* Kanishka Publishers, New Delhi (2009): 120-129.