



*Special Issue on*  
**Accelerating Change:**  
**Strategising for Gender Equality by 2030**



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# Foreword

In 2015, the world embarked on a new journey of development. All the member states of the United Nations adopted 2030 Agenda for Sustainable Development which aims to eradicate poverty, reduce multiple and intersecting forms of inequalities, end conflict, and ensure peace. The ultimate aim of the Global Goals is to bring about transformatory change.

Gender equality is one of the critical aspects of sustainable development (SDG 5) as well as integral to each of the 17 goals of Agenda 2030. In fact 23 percent of the framework of sustainable development makes specific reference to women's empowerment as both an objective as well as a necessary foundation of development.

While the world has made significant progress in reducing gender inequality (as per the Millennium Development Report, 2015); gender gaps remain. Gender inequalities still persist, and manifest themselves in each and every dimension of development. Across countries women and girls continue to experience multiple and intersecting forms of discrimination. Therefore, Goal 5 of sustainable development gives a clarion call to all global leaders to accelerate the process of social change: eliminate all forms of violence against women, ensure and enforce leadership of women at all levels of decision-making, and provide women access to ownership of property, finances and information and technology.

More than two years into this journey of implementing Agenda 2030, it is time to analyse the gain and gaps in the process, understand challenges in the pathway for social change and document good practices adopted to effectively mainstream gender in all sectors of development.

The Special Issue on ***Accelerating Change: Strategising for Gender Equality by 2030*** uses a monitoring approach to understand how we are acknowledging the unique vulnerabilities of all women and girls and consequently accelerating the process of reducing gender inequality in all sectors of life.

In consonance with the targets set out in SDG 5, the Special Issue includes articles which encompass a wide range of topics: challenges and progress on women's rights and equality, identity, voice and agency of women, access to information and communication technology, women entrepreneurs and leadership, financial inclusion of women, health and nutrition and gender responsive data.

The purpose of the Special Issue is twofold: create a dialogue on the newer forms of challenges, discrimination faced by women and girls which need to be urgently

addressed and on the other share models of good governance which can be adapted to accelerate the journey towards equity and justice.

The selected papers aptly represent the spirit of the Special Issue by addressing -  
a) challenges involved in responding to gender equality commitments by 2030 and  
b) by mapping innovative gender-based initiatives which are worthy of replication and can accelerate the process of reducing gender inequality.

The time is now to act and transform the lives of women and girls.

**-Dr.Sreerupa Sengupta**

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## Women Empowerment in India: Rhetoric or Reality

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### Abstract

*Women Empowerment has been a strategy to achieve gender equality since colonial period. In spite of the de jure women empowerment to bring in gender equality attention needs to be focussed on de facto women empowerment to achieve/materialize the goals of sustainable development of the nation. The present paper attempts to highlight the trajectories of empowerment of women in post-independent India. The paper is divided into four sections. The first section delves on how women empowerment became an agenda for the new nation (India) experimenting with democracy. The second section will look at the various measures of empowering women through education and how far this strategy has been successful. The third section will explore the empowerment of women through involvement in economic activity. The fourth section looks into the cartographic changes in law which attempts to prevent/combat violence against women and ensures equality between the sexes as stated in the Constitution of India. The paper concludes with the belief that for a nation to develop effective measures need to be implemented to empower women as equal citizens.*

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### INTRODUCTION

Few months back two girl students from Open University had approached my colleague and asked her to recount on her journey of empowerment. She told them they were seeking answer from the wrong person. She had a similar view like the developmentalist/capitalist discourse has on empowerment. When you talk about empowerment one tries to look into a target population who are poor, illiterate, underprivileged, discriminated, marginalized, invisible (wo)men devoid of access to resources to uplift themselves and improve their status by maximizing their capacities, skills, resources and opportunities and the ways to empower them is through external (sometimes internal) intervention like awareness generation, group approach and provision of support services.

Women Empowerment has been a concern since the colonial period but the ways to address the women's question has been different in colonial and post-colonial India. Initially, in colonial India attempts were made to modernize the conditions of women which were stalled by nationalist politics. Changes which were introduced to improve

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the conditions of women (to become better wives, mothers and companions to educated husbands) came from the socio-legal pressure put by social reformers. Women Empowerment in colonial period came with a clause to retain the tradition and not modernize by aping the West. Women's organizations which were formed during the colonial period looked up to the nationalist parties to fulfil their dreams to empower women. However their dreams were sidelined to accomplish the larger dream of an independent nation and a promise to be realized as the nation achieves its freedom from the clutches of colonial rule. The next section discusses how the agenda of women's empowerment was put down in black and white in the Constitution of India and various laws/schemes which vouched for a gender equal independent nation.

### **Women's Empowerment in Independent India**

"...At the stroke of midnight hour, when the world sleeps, India will awake to life and freedom...", said Jawaharlal Nehru, the first Prime Minister of the Nation at the promising hour for a bright future with new hopes, dreams and promises of a new independent India; a new nation that was experimenting with democracy to promote gender equality and equal opportunity for its citizens. Women empowerment has been a strategy to achieve gender equality since colonial period and the promise to achieve gender equality was carried forward in the new independent India. But in reality the promises made by Constitution of India and laws enacted to empower women remained in paper as pointed by '*Towards Equality*' Report (1974)<sup>1</sup>. The report came out on the eve of declaration of International Year for Women in 1975 by United Nations to highlight the position of the Indian women and the roadmap for empowering women.

The issues discussed in this report are still debated today. This report raised the need for National Commission for Women which was formed in 1992. Various new organizations were formed and existing organizations were revitalized to fulfil the dream of emancipation of women and shape/address the women's question in independent India. Women's oppression and the struggle for equality led to the formation of 'Autonomous Women's Movement' which acted as a platform bringing together women from varied backgrounds. Unlike women's organizations in colonial period, women's organizations in post-independent India rapidly built networks among each other. Journals and magazines were published on women's question focussing on the organizations strength. For Example, *Samta* and *Stri-Sangarsh* formed out of feminist based (students) discussion group of University of Delhi and Jawaharlal Nehru University did not have any member with political groups affiliations and came out with journal/magazine which deliberated on exercise of conscious raising through critical feminist writings. However, one of the feminist

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<sup>1</sup>'*Towards Equality*' Report (1974)<sup>1</sup> is a report of the committee on the status of women in India headed by Vina Mazumdar.



groups in Bombay who were part of far left political parties and had some experience in organizing, campaigning and negotiating with political groups came out with a journal/magazine based on their experiences as activists. Journals and magazines were published not only in English (like *Manushi*, Feminist Network published from Bombay or Women's Voice published from Bangalore) but also in regional languages (like *Ahalya*, *Pratibadi Chetna* in Bengali, *Baiza* in Marathi and *Stree Sangharsh* in Hindi) to promote women's equality (Kumar, 1998). Education was seen as a way to arouse consciousness in women to bind them with the thread of sisterhood so as to work towards the annihilation of gender oppression and empowerment of women. The following section discusses the ways to empower women through education.

### Women's Empowerment through Education

The Headlines of *The Assam Tribune*, a local daily newspaper read "56.04% clear HSLC<sup>2</sup>, boys outshine girls" reflecting the gender disparity in education (56.04% clear HSLC, 2018). Census of 2011 recounted again that compared to boys, girls has lower literacy rates, lower enrolment rates and higher drop-outs rates (especially in elementary levels). However, it is a known fact that there are state wise disparities and rural-urban disparities. Access to education has been a struggle for 53 per cent of the women in rural India (Mazumdar, 2011). There are several schemes to attract school going children and to address educational inequalities like Sarva Shiksha Abhiyan which provides free textbooks from primary to high school and providing free uniforms, Mid-day meal schemes to provide nutritional meal to government school children, scholarships to pursue one's education. But my field studies (carried out in Rajasthan in 2008 and Guwahati from 2011-2016) have shown that only small section of students benefit from the scholarships, students receive scholarships late or lesser amount, disbursements are faulty, incentives are inadequate, even if textbooks are free but the copies, stationeries and transportation from residence to school are not free, classroom teaching does not distinguish between slow learners and advance learners for which slow learners have to take tuition, absence of teachers appointed in rural areas or shortage of school teachers.

Women's equality in education is associated with access to schooling and fair and just educational opportunities to pursue higher education. This access of formal education are linked with distribution of resources, parents biases towards girl child (for which we had to have the slogan "*Beti Bachao, Beti Padhao*"); households spend less on girl students not only in government school but also in private schools in comparison to boys. One of my neighbour's sends their son to private school but send their daughter to government school as they view daughter's education would not benefit the family in the long run. Girl students in low economic families act as a helping hand to their working mothers replacing them in time of ill health or taking care of their siblings. Apart from these there are other factors in rural as

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<sup>2</sup> HSLC is abbreviation of High School Leaving Certificate for 10<sup>th</sup> board examinations.

well in urban areas which act as barrier to female education like social customs and practices (like girls seclusion, puberty, early marriage, early pregnancy and motherhood, household responsibilities and gender biases), parents' apathy, mother tongue not the medium of instruction, social discrimination and so on. For example in the 2009 court case of Gurleen Kaur and others versus Shrimani Gurdwara Prabandhak Committee (SGPC), Gurleen Kaur and others were not given admission in MBBS course in Sri Guru Ram Das Institute of Medical Sciences and Research Amritsar run by SGPC as they pluck their eyebrows and trim their hair. When Gurleen Kaur and others challenged SGPC on the court gave verdict in favour of SGPC stating that Gurleen and others have flouted a basic tenet of Sikhism and thus SGPC had the authority to deny them right to admission to the course. Thus, we can see that the religious sentiment of a minority community is upheld at the altar of right to women's education (Girls who plucked, 2009).

An analysis of school textbooks depicts the traditional sexual division of labour and sex biases (like NCERT textbooks depicts male child appearing more in stories and positive role than female child). Positive messages in textbooks can impact the minds of women as happened in the Andhra Pradesh in early 90s where women waged war against alcoholism, closed down liquor shops, took action against liquor dealers and even their husbands. This had affected the state revenue earning for which the state even went to the extent of censoring the textbooks which circulated such messages to empower women. Even in the selection of course/stream women are still concentrated in humanities rather than science. There are certain reasons behind it like pursuing science requires extra hours in laboratory, socio-cultural factors or discrimination faced by women students.

In spite of all the roadblocks and lacunas mentioned above education is often seen as one of the ways to empower women. Studies have proved that educating women has resulted in personality development, better healthcare, improvement of education and nutrition levels of children, reduced infant mortality rates and population control which currently is an important factor to solve problems arising out of population explosion in India and sustainable development of the nation. Stated below are strategies to empower women through education:

- Steps should be taken to reform contents of school textbooks in fact the entire education system to break the taken for granted assumptions in society and gender stereotypes. Such efforts are being carried forward by conscious content writers of NCERT and SCERT textbooks to make the contributions of women visible and break gender stereotypes. For example Padma<sup>3</sup> who designed history textbook had to debate with her male colleagues for incorporating and highlighting women martyrs and heroines in the freedom struggle.

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<sup>3</sup> Pseudonym has been used to maintain anonymity and confidentiality of the person.

- Bridge School Camps should be promoted to bring back drop out girl students. Study conducted by Rampal (2009) shows that in Ranga Reddy district of Andhra Pradesh bridge school camps facilitated in enrolling back girl students who had drop out due to early marriage and other reasons.
- Women Empowerment should be promoted not only through literacy but also through vocational education which make women self-reliant as it expands the scope of employment while making women financially independent.
- Non-Formal Schools should be promoted to increase enrolment rates. My field study in Rajasthan (2008) showed that elementary education in non-formal schools by teachers from the local area showed greater number of enrolment in elementary government schools.
- Study conducted by Ramachandran (2012) showed that providing cycles to girls students beyond elementary level improves the rate of attendance and learning.
- Studies have shown that militarization of schools in naxalite or militant prone areas have led to increase in drop-out rates especially of girl students. As schools in rural areas are one of the well founded structure police and army find it convenient to transform into barracks and camps resulting in displacing the students out of the school structure. Efforts should be made not to occupy school structures or create make-shift schools in safe areas to ensure continuity of education in disturbed areas.
- Steps should be taken to preserve tribal dialect by developing study materials, provide training to teachers and promoting education in remote areas in their own dialect.
- Steps should be taken to spread awareness regarding female education like 'Beti Bachao, Beti Padhao' (although in a different context) so as to make people conscious the advantages or contribution women can make to family, community and in the development of the country.
- Studies have shown that presence of female teachers have motivated in the retention rate of the girl students.
- Apart from presence of female teachers certain basic facilities should exist to facilitate the retention rate of girl students like toilets (not necessarily it has to be a '*prem katha*' to provide it but it is a basic necessity), sanitary pad (Thanks to 'Padman' taboos are gradually eroding, people openly speak about menstruation. But even in urban areas when you ask for sanitary pads in shop (earlier it was written in chits to purchase now girls are at least vocal) it is wrapped in newspaper or wrapped in a opaque packet where the person purchasing other items also gets to know what mafia item you came to purchase), drinking water, low student-teacher ratio which

enables effective teaching-learning, regular classes and basic infrastructure are certain essential requirements which needs to be taken care of to empower women through education.

- Social Audits of the various educational schemes should take place annually to map the progress of implementation of the schemes and get to know about anomalies which hinders in effective implementation and find ways out.

Apart from education, participation of women in economic activity is also seen as another means to empower women.

### **Women's Empowerment through Economic Activity:**

Empowerment of women in independent India was also envisioned through participation in economic activity getting them out of the four walls of their private sphere to the public sphere. The Era of Liberalization, Privatization and Globalization introduced through Structural Adjustments Programmes (SAP) envisioned to usher in 'feminization of labour'<sup>4</sup> in India, which implied greater employment opportunities for women. However, the trend is towards decreasing participation of women in labour force due to introduction of automation and new technologies (Shah, Gandhi, Gothoskar & Chhachhi, 1994). One can argue that feminization of labour did take place in sectors where it was cheaper than male labour primarily in low paid jobs in informal sector. Jobs are created by new technologies but the women employed are not the same set of women but comprising of young, educated and equipped to handle technology. New technologies create new problems if women work in non-unionized industries they are devoid of workers' rights, healthcare and medical benefits are curtailed.

To cut the cost of production certain industries like bidi making, incense stick making and so on shift from organized to unorganized sector. Loss of employment for women due to recession or closing down of traditional factories which earlier consisted of greater number of female labour force leads women to take up jobs even at low wages, poor working conditions, with long hours of work, subjected to occupational hazards, facing harassment/stereotyping, without any labour welfare benefits or rights, fewer opportunities for promotion and lack of job security which was pointed decades earlier in '*Shramshakti*' (1988) report of national commission headed by Ila Bhatt on Self-Employed women and Women in Informal Sector New. Studies have shown that women and children are hit hard during recession which affects their nutrition levels, increase in workload (due to increase in prices of food items, water, fuel and electricity they have to work more to survive) and rates of mortality. Apart from the employment in the informal sector, even the formal sector women have to face discrimination, usually concentrated at the lowest

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<sup>4</sup> 'Feminization of labour' is used here to refer to visibility of women workers in traditionally barred areas of work.

rung of ladder and face glass ceiling in terms of career advancement. With SAP the real costs were borne by most disadvantaged sections of society while the benefits were reaped by a small section of society. Similar happened with the annual budget that was passed this year where the joke circulated was the poor got subsidy, the rich got rebates and the middle class got embroiled in debates. The vulnerable image of women workers due to SAP is only a partial image as some would argue referring to the uniqueness of the Indian scenario and highlighting the agency of women workers being conscious of their rights as workers, forming unions and demonstrating in front of court rooms, negotiating their identities as worker citizens and acting as pressure groups to implement statutory labour laws (Hensman, 1999). Following strategies are suggested to empower women through economic activities:

- Encourage to purchase items made by women through 'Make in India' initiative. I am not promoting the saffron version of 'Make in India' but using the phrase to refer to purchase products of co-operatives, NGOs, SHGs and so on which are made in India. For example, my field research in Rajasthan (2008) showed that rural women do embroidery or stitch clothes getting a meagre wage on the basis of piece rate system and such clothes are labelled as a particular brand and sold off in showrooms. If the rural women start co-operatives by getting loans from bank or any financial institutions or get financial aids they can create a market of their own.
- Unions for women working as casual labourers. Example can be cited of Tamil Nadu Construction Workers Union which takes up cases related to violence against women, contributing financially in social ceremonies, looking after the healthcare of its members and takes care of matters of disputes (Shah, Gandhi, Gothoskar & Chhachhi, 1994). Trade unions should be linked with national and international labour forum so that their grievances are heard to a wider audiences and effective action are taken to sort their grievances.
- My field studies (carried out in Guwahati between 2011-2016) have shown that even though women are doing same work as men in the informal sector they are paid less. Segregation of income reflects the biases/inequalities that exist in society. There is a need to fight for and attain equal pay for equal work to attain gender equity in India.
- Communal Kitchen could be established in every wards or wherever necessary to liberate women so that they can devote more time in their jobs rather than thinking about meal to be cooked for their family members.
- Similarly crèches should be introduced for taking care of children of working mothers in informal sector. This facility is available in certain cities but not widely implemented in pan-India.
- Working women hostels should be promoted both in urban and rural areas to increase the participation of female labour and provide safety/security to working women.

- In my fieldwork (carried out in Guwahati between 2011-2016) I have noticed that migrant workers are unable to access the Public Distribution System in their place of destination which leads them to take recourse to black market to purchase their essentials. Public Distribution System should be made accessible to migrants in place of destination to avail the welfare benefits of their place of origin in a hassle free manner. Moreover, it is noticed that in Public Distribution System is not fair; goods are hoarded and sold off at high price taking advantage of the vulnerability of the migrants. Public Distribution System should be like food marts where goods available are displayed for purchase.
- Safe drinking water should be provided to curtail the daily time and distance taken to fetch water in slums or rural areas.
- Training women in informal sector to develop new skills. If new technologies are introduced in workplace then on-the job training should be provided to women workers to develop new skills and equip them to handle new technologies rather than laying them off.
- As opening a bank account is a cumbersome process (due to limited banking hours and complying with bank formalities like filling application forms or finding guarantors) women in informal sector find it easy to save in chit fund or borrow money from informal lenders. With Pradhan Mantri Jan Dhan Yojana it became easy to open bank accounts but poor people especially poor women are considered as unreliable clients as their earnings are erratic and rate of unforeseen expenditure is high. Micro-Financing/ Credit facilities should be available to women for productive employment. This would not only empower the women availing the credit facilities but it would have a trickledown effect in empowering other women in that area as has been found in Human Development Report (2005).
- Studies conducted by Bina Agrawal (1994) shows that land/property ownership by women leads to economic empowerment and gender equity in society. Ownership of property improves their status in society, improves their control over resources, increased participation in decision making process and bargaining power.
- Conscious raising through advertisements, hoardings, street plays, changes in school textbooks, socialization and like methods to remove biases regarding working women be it formal or informal or mixed sector of employment. Men should share the domestic responsibilities and do household tasks to relieve working women from double burden of work and promote democratization of gender relations. Even children should be encouraged to do whatever they can in household tasks (training 'Arjun's to teach the lesson of gender parity as depicted in "Comfort Fabric Conditioner" advertisement).

- Invisibility of women working in informal sector or doing household work should be highlighted and acknowledged as a form of work which will motivate their dignity as women work contributing to their social and economic status in society. Effective ways should be devised to measure such work and incorporate it in National Economic Accounting.

### Women's Empowerment through Law:

The Lady Justice has been blind to ensure equality of gender in her scales. Most of the family laws are still differentiated on the grounds of religion and community. We see it in the Shah Bano case where justice awarded was seen as attack on minority community and their religion. The recent Kathua rape case saw the division along communal lines and political parties benefitting from the rape and murder of 8 year old Asifa Bano rather than giving justice to the heinous crime committed on a minor. Today there has been an alarming increase of registered cases on violence against women. Some of the reasons are behind this increase in 'rate of crime/violence against women' are due to awareness of laws for protection of women's dignity, efforts of activists, media, NGO, women's movement and police to drag violence behind locked doors in private sphere to public sphere. Women's Movement has facilitated in articulating demands of women in the language of rights and entitlements to be ensured through law. Feminist lawyers (Indira Jaisingh, Flavia Agnes, Vrinda Grover, Meenakshi Arora, Kriti Singh and others) were part of framing of laws and executed cases on behalf of women. Women's Movement played a crucial role in cartographic changes of law to promote a gender equal society. Some of these laws are: Medical Termination of Pregnancy Act (1971)<sup>5</sup>, inclusion of dowry death in Indian Penal Code (1986)<sup>6</sup> after the numerous occurrences of death of women soon after marriage which were earlier camouflaged as accidental death or suicide which was highlighted by the anti-dowry campaigns of 80s, Protection of Women from Domestic Violence Act (2005)<sup>7</sup>, Factories Amendment Act (2005)<sup>8</sup>,

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<sup>5</sup> Medical Termination of Pregnancy Act (1971)<sup>5</sup> gave the right over woman's body who may wish to abort the foetus within 5 months of pregnancy under certain conditions. However feminist legal scholars argue that this law is passed in favour of covert interests of the state's agenda of population control.

<sup>6</sup> The judgement for the cases of dowry death varies from life imprisonment or death penalty to acquittals.

<sup>7</sup> Protection of Women from Domestic Violence Act (2005)<sup>7</sup> registered for the first time the term 'domestic violence' in the vocabulary of Indian law which included any kind of abuse- physical, verbal, emotional, sexual and economic by a woman's husband or relative as punishable by law.

<sup>8</sup> Factories Amendment Act (2005) which restricted women working in factories from 7pm to 6 am.

Domestic Workers Welfare and Social Security Act (2010)<sup>9</sup>, Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (2013) formed after the Vishakha judgement in favour of Bhanwari Devi<sup>10</sup> (in the landmark case of Vishakha and others versus State of Rajasthan), Criminal Law Amendment Act (2013) after the Nirbhaya case which changed the definition of rape and where the onus of proof is to be provided by the perpetrator of violence rather than the victim, Maternity Benefit (Amended) Act (2017)<sup>11</sup> and Triple Talaq Judgement (2017)<sup>12</sup> to name a few landmark judgements and laws passed/ amended through the efforts of women's movement. Legislations are not adequate solutions for empowerment of women but the implementation of the laws will ensure a gender equal society. Ratna Kapur and Brenda Cossman (1999) provide a comprehensive analysis of case law of High court and Supreme Court which are discussed below:

- Protectionist Approach: Women are considered different than men on the basis of biological differences and are seen as weaker than men and hence in need of protection. This view invalidates any claim of women to equality and thus subordinates women.
- Sameness Approach: This approach views women and men as same and are treated equally in the eyes of law which undermines to compensate for past injustice.
- Corrective Approach: This approach is based on providing justice to the disadvantaged which leads to the question of whether it contributes to disadvantaged or helps in surmounting the disadvantaged. Similar kind of dilemma can be seen in the case of protective discrimination that whether it is beneficial for the discriminated sections or it perpetuates the discriminated section to get benefits. This approach views that in order to rectify the past injustices, women may have to be treated differently. Emphasis to provide justice should be on the basis of corrective approach

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<sup>9</sup> Domestic Workers Welfare and Social Security Act (2010) led to the regulation of working hours of domestic workers and provided intervals for rest with provision of food for full time workers.

<sup>10</sup> see Pandey, Anshul Kumar. (2016). *All You Need To Know About The Bhanwari Devi Case That Led to The Formation Of The Vishakha Guidelines*. Retrieved 31 May 2018, from <https://www.indiatimes.com/news/all-you-need-to-know-about-the-bhanwari-devi-case-that-led-to-the-formation-of-the-vishakha-guidelines-261665.html>

<sup>11</sup> Maternity Benefit (Amended) Act (2017) which now includes women working in informal sector or women working more than 80 days with medical benefits, paid leave for 26 weeks and other allowances.

<sup>12</sup> Triple Talaq Judgement (2017)<sup>12</sup> forging the boundaries of Muslim Personal Law upheld it as unconstitutional and punishable by law.



as it leaves space for relative advantage and disadvantage to women based on particular context. Corrective legislations should be upheld as it leaves room for sameness or difference between men and women depending on a particular context and dispenses justice accordingly. Following are some strategies to empower women through Law:

- Mere enactment of laws does not qualify that it reaches its beneficiaries. Review Committee should be set up to ensure implementation of laws to fight violence against women.
- The judiciary and officials has to be sensitively selected. There should be greater number of women in judiciary.
- The language of law should be carefully and sensitively framed to ensure gender equality. For example earlier rape laws were framed in such a manner that there were loopholes which the perpetrator of violence used to escape punishment. The sexual past and character of the victim was questioned and doubts were raised in case of an adult regarding consent. Due to existence of such loopholes women in certain profession like bar dancers, sex workers, waitress and performers even if they were victims there character was assassinated denying their right to dignity of their work.
- The stigma attached with divorcee women or a rape victim should be removed through raising awareness on maintaining the dignity of women and giving her the right as individual. Flavia Agnes (2012) adds that maintenance after divorce is seen more in terms of needs of a women rather than their right set against their sexuality and their sexual purity. Agnes says divorce proceedings should be devoid of misogynistic biases, more speedy, financially more fair and just to women.
- Stringent laws are not the solution to address violence against women. Efforts should be made in changing the patriarchal values of family and community.

## Conclusion

Although females comprise nearly half the population of India, yet the status of women in India still lags behind many developing countries. Recently Kareena Kapoor Khan declared she is not a feminist and was trolled for her statement. Prior to her there were so many Indian women who declared they are not feminists. By labelling oneself as feminists does not mean one is working for women's cause. One may not use the label 'feminist' and still work for the empowerment and betterment of women. In spite of Constitutional Provisions, laws and several schemes still after 70 years of Independence we are still struggling for a gender equal society. Women Empowerment does not simply reflect by having a women defence/external minister but empowering women at the grassroots level as well as in the urban slums and fringes. Socializing the next generation regarding gender equality as is showed in

the advertisement on violence against women that one should not teach boys they don't cry but boys don't make others cry. Corrective measures through conscious socialization can help in curbing the patriarchal values and would be a step towards gender equality. For translation of women's empowerment from rhetoric to reality, I would conclude by saying if a nation needs to develop in a meaningful way it needs to empower women.

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## The Voice behind the Veil: An Exploratory Study on the Identity Politics of Muslim Women and the Practice of Veiling (Hijab) in Hyderabad

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### Abstract

*The powerful institutions of family, religion and state institutions have structured the practice of veiling as not only indicative of a woman's self-identity, but also her gender, religious, sectarian, identities. Thus, this paper adopts the phenomenological point of enquiry into the nature of identity politics of Muslim women attempting to place the Hijab as the point of intersection between the religious, gender and class identities. The research study is set in contemporary Hyderabad and enquires into the lives of people who have engaged critically with the practice of ethnic veiling in Islam drawing on the narratives of 53 Muslim women using in-depth interviews and focus group discussions. A thematic analysis has been used to synthesize the data highlighting the centrality of context specificity to identity politics on the veil. This paper moves beyond the monolithic construction of the black burqa and politically convoluted dichotomies of oppressor- emancipator, informed choice vs. religious mandates and backwardness vs. modernity towards a more nuanced understanding of the veil.*

*This paper is an exploratory study that seeks to unearth connections between veiling, identity, power, and its intersection with religion and gender. It is set in contemporary Hyderabad and enquires into the lives of people who have engaged critically and creatively with the veil not only as a marker of intersected positions set in hierarchical fields, but also as discursive points that can be used to pose a symbolic challenge to the oppressive systems of patriarchy and religion.*

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### INTRODUCTION

Clothing has been constituted as an artificial envelope used to hide-reveal the natural biological body. What most scholars overlook is that fact that clothing manifests into a bodily extension that cannot be removed without transforming one's bodily sense of self (Al-Saji, 2010). Pioneer scholars Merleau-Ponty's (1945) riveting work "*Phenomenology of Perception*" has revealed that habituation has transformed clothing from merely being an abstraction from the body to an

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integration into one's body schema. Bodily extensions then constitute dimensions through which individuals perceive and interact with the world where bodily limits are felt not at the skin but at the edges of the clothing, thereby redefining one's sense of 'here and there' - leading to a reconfiguration of external space. Thus, the discussion on ethnic veiling in Islam does not merely pertain to significance of the clothing but goes beyond a superficial covering to uncover the spiritual, religious, political and cultural connotations of identity.

Given the current socio-political landscape- of a democracy in crisis and shift in global politics towards the right -there is a need to re-examine the creation and transformation of this ethnic identity of the veiled Muslim Woman. With a rise in terror attacks- all eyes have turned to the bearded men and veiled women- transforming "Islam" into the dirty word convoluted with notions of fear, exclusion and deviancy. The veiled Muslim woman has been constructed as both victim and perpetrator in contemporary times- where she is passive, helpless and must be emancipated from an inherently paternalistic religion is also the aggressive fundamentalist who forces values onto the defenseless and unwilling individuals. (Evans, 2006, cited by Howard, 2012) Thus, the Muslim veiled woman has emerged as a threat to the '*liberal egalitarian order*'-as theorized by the West.

Attempts to regulate the practice of veiling have been made across Europe- Belgium banned the headscarf in public spaces in 2010 citing security reasons, while Germany sanctioned restrictions

on religious clothing and symbols in 8 states in 2004. France banned veiling in schools in 2004 in solidarity with the philosophy of French secularism. Do these images represent an accurate reality of Islamic women? The problems that underpin this rhetoric of prohibition are patriarchy and culture which are mutually reinforced and amalgamated to form a superstructure imposed on women (Janson, 2011). It is within this context of growing Islamophobia and violence against women that I fix my research study. There is a need to de-construct religious and socio-political identity to draw distinctions between tenets of religion and patriarchal imposition of ideology upon individuals under the garb of "oppressed" and "emancipatory".

## **Review of literature**

### **Deconstructing Identity: Psycho-Social Underpinnings**

*"Identity: is a concept that neither imprisons (as does much in sociology) nor detaches (as does much in philosophy and psychology) persons from their social and symbolic universes, [so] it has over the years retained a generic force that few concepts in our field have."* - (Davis 1991:105) *Identity is never a priori, nor a finished product; it is only ever the problematic process of access to an image of totality.*" (Bhabha 1994:51, cited by Howard, 2000) The psycho-social underpinnings of identity re-iterate an emphasis on social cognitive and symbolic interactionist paradigms of research. The theory propounds that the social positions we occupy

weigh in heavily on our sense of self and the process of identification. Thus, social identities are embedded within sociopolitical contexts (Howard, 2000). Phinney's (1990, cited by Howard, 2000) extensive work on the formation of ethnic identities reveals that identity development is conflict ridden and associates aspects ethnic self-identification, a sense of belonging, attitudes toward one's own ethnic group, social participation and cultural practices, and empirical findings on self-esteem, self-concept, psychological adjustment, ethnic identity in relation to the majority culture, changes related to generation of immigration, ethnic identity and gender, and contextual factors with them. Thus, scholars cast ethnic identification as situational and volitional - constructing it as a dialect between internal identification and external ascription (Howard, 2000).

### **Orientalism & Historicity of the Hijab**

Historically the origin of the veiled woman's identity can be traced by to the Orientalist discourse as theorized by Edward Said (1978) which polarizes the traditional eastern culture from Western modernity, constructing the East as - "*victims of their own culture*" thereby justifying colonialism as an art of protection- "*white men saving brown women from brown men*" (Spivak, 2008, as cited by Down, 2011). The ways in which the Hijab has been interpreted as a symbol of oppression are two-fold in nature - role of the native informant and peril of false consciousness -implying that women who claim to wear the veil out of choice have internalized the patriarchy of their culture and lack a sense of agency. Under this conception how women who veil articulate their own desires, experiences and motivations becomes irrelevant as they are not agents in their own right: but merely puppets of patriarchy, devoid of agency (Down, 2011 & Bracke & Fadil, 2012).

### **A Dialogue between Liberalism and Multiculturalism**

The core of the anti-veiling discourse lies within notions of choice and agency- constructs of the Liberalist paradigm. The fundamental postulates under liberalism are that man is rational and autonomous- capable of decision making and the pursuit of his/her own interest. (Down, 2011). With reference to the Hijab, the contention is that it is not a matter of choice but an inherent lack of one- if the burqa signifies submission, then logic dictates that those who subscribe to it lack agency (Down, 2011). Bilge (2010) notes: "*the eviction of veiled women from the realm of agency is achieved through a syllogism: Agency involves free will; no woman freely chooses to wear the veil because it is oppressive to women; thus veiled women have no agency.*"

The most virulent critique of the liberalist choice argument is offered by the Multiculturalist paradigm. This perspective constructs individuals as born involuntarily into groups of- family, ethnicity, and state, deeming it impossible for an individual to make choices in abstraction from culture. (Down, 2011). As Kymlicka (1995) aptly concludes in his book '*Multicultural Citizenship: A Liberal Theory of*

*Minority Rights'* - culture forms the context of choice. Multiculturalism also critiques liberalism stating that institutions are not neutral but embody values and norms of a culture, and can have a discriminatory effect on those that lie outside that culture in the form of a differentiated citizenship (Down, 2011). It can be argued that this singular focus on gender- equated with rights and multiculturalism equated with culture places these two theories as oppositional to one another.

### **The Multi-Faceted Veil**

The veil has no singular meaning but is multifaceted with variances across borders. Research dictates that the Hijab has a dualistic connotation where it has been the source of identity, expression and personhood for women but also turns oppressive, controlling women's sexuality and mobility (Posetti, 2006). What is lacking in the debate is the opinion of women- both those that veil and those who choose not to. The feminist discourse accords women visibility- as substantiated by Sandra Harding's Standpoint theory (2004) - drawing on the importance of lived experiences and constructing the subject of study as the primary source of knowledge.

Reasons for wearing the Hijab are variegated, diverse and context specific. Some of these reasons evident across a plethora of research studies are-: to affirm religious identity as an informed choice, due to religious obligation and family pressure, to create a safe space and negotiate in public spaces, relieve burden of the male gaze and avoid sexism and commodification, to gain respect and oppose stereotypes and discrimination, as a symbol of protest and resistance (Dwyer, 1999; Read and Bartkowski, 2000; Williams & Vashi, 2007, Siraj, 2011, Dywer, 1999, cited by Bhowon & Bundhoo, 2016). For which specific reason women choose to veil may also be shaped by their minority/majority status, whether religious identity is threatened or not, national policies on ethnic diversity (Bhowon & Bundhoo, 2016).

The veil has become a subject of obsessive attention and extensive interpretation (Davary, 2009, cited by Williams, 2014). Scholars note that the contemporary control is one in which hegemonic notions about woman and Islam continues to be shaped by racism and ethnocentrism. Both compulsory veiling and bans rob women of their agency, ignoring the question of how women themselves choose and want to cloth themselves. As Lyon and Spini write (2004: 341, cited by Howard, 2012), 'the answer to one constraint (the religious obligation to wear the foulard [headscarf]) cannot be another constraint (the obligation not to wear it): an effective process of liberation cannot be based on a prohibition [their emphasis]' (Bracke & Fadil, 2012).

Muslim identity has mostly been studied in the context of immigrant minorities and in Western contexts where their identity may be threatened by the majority group but much less in multicultural contexts where Muslims are an unthreatened minority group (Cited by Williams, 2014). It is within this paucity of exploration and study that I root my research within the discourse.

## Methodology

The purpose of the study is to explore- the nature of identity politics of Muslim women in relation to the cultural practice of veiling (Hijab). The second question posed is whether the practice of veiling perceived as an assertion of cultural identity and hence as an act of empowerment or is it regarded as a tool of coercion and violence? The research objectives aim to-

- Understand the practice of veiling in the Muslim community. Is it a religious, socio-cultural or gender construct?
- Determine the impact of veiling on familial relationships, mobility of women and stigmatization.
- Study perceptions of Muslim women on the politicization of the Hijab in the contemporary world.

This research study uses the phenomenological qualitative mode of enquiry where my analytical thrust remains focused on the narratives of my participants, as active producers of a discourse on critical veiling by way of lived engagements with their own Islamic veiling practices. The study is rooted within the liberalist-multicultural feminist frameworks constituting a dialogue between the two paradigms. This study documented & collated narratives of 53 participants through in- depth interviews that were semi-structured in nature. The interviews were conducted across a 2 month period during November-December 2017. The sample was drawn purposively and remained criterion based initially, later evolving into snowball sampling. I picked respondents that came from all walks of life to incorporate how socio-cultural factors affect one's decision making and world view. There was diversity in socio-cultural factors of age, education, income and work, marital status, etc coupled with a variance in the status of veiling within the sample. The women of high income households were mostly married and with kids, some migrated from other cities due to their husbands work. A large number of these women were either teachers working at educational institutes or housewives. Some of the higher income women had lived in Saudi during their childhood and were thus able to bring forth new insights. The women from lower income households were domestic workers, migrant workers, aayas in schools and even younger women who had dropped out from elementary education, preparing to re-give their exam. Given below in the table is a concise overview of the participants and their socio-cultural background. The backdrop of this research study is contemporary Hyderabad and interviews were conducted across the following locales- Banjara Hills, Old City, Jubilee Hills, Gachibowli, Borabanda, Shaikpet, Towlichowki and Abids. Focus group discussions and observational learning techniques were also used during data collection.

**Table 3.7: Participant Profiles**

| SNo | Variable and Determinants  | Number of Participants  |
|-----|--|---|
| 1.  | Age<br>-15-22 in age (adolescents)<br>-22-40 in age<br>-40-60+ in age  | 30 Participants (57%)   |
| 2.  | Do they prescribe to veiling?<br>Participants that veil<br>Participants that do not veil   | 45% participants (85%)<br>8 participants (15%)  |
| 3.  | Educational status<br>Currently in School<br>Currently at University/ College<br>Completed Graduate degree and above<br>Uneducated | 25 participants (include drop outs) (47%)<br>9 Participants (17%)<br>16 participants (31%)<br>3 participants (5%) |
| 4.  | Employment status<br>Employed<br>Unemployed (have worked previously)<br>Never been employed (students)                             | 12 participants (23%)<br>25 participants (47%)<br>16 participants (30%)   |
| 5.  | Marital status (no divorces or engaged participants)<br>MarriedWith childrenWithout children<br>Unmarried<br>Widowed               | 18 Participants (34%)<br>14 (26%)4 (8%)<br>33 participants (62%)<br>2 participants (49%)                          |
| 6.  | Social Location<br>Higher income households<br>Lower income households   | 26 participants (49%)<br>27 participants (51%)  |

## FINDINGS AND DISCUSSION

The discursive construction of the Burqa as monolithically oppressive has remained the overarching perspective on ethnic veiling- overlooking the intricacies of Identity construction. The primary findings explored aspects of what the veil means to the participants - exploring their self concept and schemas, and how this act of veiling manifests in their everyday experiences-for better or worse. A thematic analysis was done to synthesize verbal clues and derive the following themes- Defining the



Veil, Reasons for Veiling, Social Determinants that influence women's decisions to veil, Multiple-meanings accorded to the veil (safety, mobility, equalizer, protection from commodification, assertion of religious identity), Reactions to the veil in Public spaces- discrimination and stigma, and lastly fixing the veil into the Islamic identity of the Muslim Woman.

### **The Politics Veiling: Constructing an Islamic Identity**

The Muslim veil is an item of clothing that has been regarded as both **material and conceptual**. As a material object, the veil is a fabric which comes in different forms, and since the conjunction of Hijab does not specify "what to conceal with" - the veil has emerged as a site of interpretation and altercation moving beyond the monolithic black covering. Conceptually, the veil is the embodiment of modesty in dress, behavior and speech- a philosophy of life.

There also exists a rampant incongruity the meaning accorded to the veil - conceptually. Veiling amidst the participants was most often found to be in response to either transitioning from adolescence to adulthood or as an outcome of a significant life event such as marriage & pregnancy, migrating to a new city, protection from sexual violence and commodification of the female body, health reasons and religious awakening/pilgrimage. The specific veiling reasons adopted by women to veil are also shaped by their minority/majority position in society. Women from higher rungs of society made an informed choice to veil after thorough religious learning while uneducated women relied on their religious upbringing to construct their veiling ideology.

Social determinants that affect women's decision making and Islamic knowledge were also uncovered-identifying parents, mosques and personal tutors as the main sources of Islamic knowledge. The Islamic educators- *imams, muftis, malvis and madarsa's* played a crucial role in imparting this knowledge, but also emerged as the cause of patriarchal cultural distortion of the religious text- converting religious learnings into patriarchal compulsions and restrictions on women. The family on the other hand is tasked with the responsibility of socialization and gender patterning- impacting women's self concept and schematic constructs. The role of the mother was marked as crucial across all narratives. Here, we see an intersection of gender and religion where women emerge as bearers of culture making it her prerogative to pass this learning onto her children- specifically her daughter.

A relative number of participants admitted to veiling post marriage- not out of coercion- but choice. However one must note that these choices are made within the constraints that come with being inherently "female". This essentialist notion of reducing women to docile bodies needing protection and surveillance is the basic thread familial relations are built on. Thus, it important to note that covering/ veiling and seeking protection have emerged as crucial markers of cultural norms that all women across class, caste, etc are expected to abide by. All girls are

taught to dress modestly, cover themselves when in public and stay away from the opposite sex. Most of the participants grew up covering their head with a dupatta or wearing a stole/scarf- hence the transition to veiling religiously did not lead to major adjustment issues.

### **Deconstructing the Veil: The Multifaceted Hijab**

A large number of the participants acknowledge that Hijab is religiously sanctioned but has been culturally convoluted. The Quran asks women to cover themselves and men to lower their gaze-but does not prescribe a black cloth. Participants assert that the Hijab is respectability-to the self, to towards society and towards religion-where the veil is the embodiment of modesty in dress, behavior and speech-emerging as a philosophy of life. The data received in the interviews has been collated into the comprehensive taxonomy of- Hijab as Modesty, Hijab as Assertion of One's Identity, Hijab as Safety, Hijab as Mobility, Hijab as an Equalizer, Hijab as Protection from the Male Gaze, Hijab as Control of Sexuality, and Hijab as Convenience.

As an assertion of one's religious Identity the Hijab provides Muslim women visibility while protecting their identity. This visibility obtained has positive and negative implications for the women where they experience pride and experience a sense of in-group belonging, but also report exclusionary and differential treatment in public spaces and institutions. The participants admitted that the veil was an integral part of their religious identity but could not be conflated as the only marker of their personal identity. The Hijab is also the embodiment of modesty accompanied by undertones of moral policing. The participants define modesty as a rejection of societal beauty ideals constructing their own beauty narrative by wearing long, loose clothing, covering their head with headscarf.

The respondents were divided in their belief that the Hijab prevents sexual harassment- but most agreed that it significantly reduces such incidences. With improved safety and security the Hijab also paves way for improved mobility for Muslim women in public spaces-especially those from lower sections of the society and those traveling in public modes of transportation. The Hijab was also constructed as an Equalizer -where all women stand in equal regard despite discrepancies in their social standing, age, race, caste, etc. When veiled- each woman is a silhouetted figure devoid of identity- forcing a form of uniformity. The most interesting revelation made by the participants was that Hijab is a tool of sexual control. The participants asserted that it protected women from the threat of sexual violence, placing the onus of a "safe society" on the women -they must veil to prevent men from being "distracted". It is evident from the narratives that a large number of women have embraced this essentialist notion of women as sexual beings that are inferior and must be protected from the male libido.

## Response to the Veil: Integrating Experiences of Muslim Women

In the context of rampant Islamophobia, the study confirms the phenomenon of “differentiated citizenship” (Kymlicka, 1995) - people from different cultures are treated differently than those individuals that lie within the majoritarian culture. The participants reported experiences of discrimination, stigma, Islamophobia and differential treatment but included instances of enhanced respectability. The core sites for mapping reactions were educational institutes, work spaces, public transport, cafes and eateries. Social relationships also emerged as crucial indicators of reactions with family, peer groups and colleagues being the primary sources of critical commentary. The reaction received from their peers and colleagues affirmed that there was an underlying assumption that they had been coerced into the veiling practice. The family members also expressed safety concerns due to the obvious black veil- asking the women to switch to more “neutral colors”. All married participants shared the same experiences of being stereotyped into the submissive new bride being coerced into veiling- by her husband and in-laws. Reactions at educational institutes was dependant on the nature of the institution- Women reported to feeling “culturally marginalized” as Muslim minorities in schools, admitting that veiling- led to “others” polarizing them from the rest of the class. The participants acknowledge the need to remove the Hijab in certain situations to maintain a sense of equality- but stated that it cannot be imposed without rationale and abruptly by law.

Working women provided more vivid accounts of discrimination and stigma. The subtle and implicit discrimination Islamic women face at work does not arise from the veil as a threat ideology but from the orient-occident school of thought. The Hijabi woman’s capabilities are questioned and she is treated as backward. The experiences agglomerated under this study show that this ideology is often dispelled through repeated social interaction with the veiled woman. While none of the participants were met with physical violence and abuse, discrimination was meted out in the form of bullying at schools, questioning women’s abilities, verbal abuse and lewd remarks, sexual harassment on the street, denial of job opportunities. All veiled women had been subjected to Sexist and Islamophobic remarks. Here we observe the intersection of essentialist sex-roles with the oriental discourse- where Muslim women are not only regarded as soft spoken, demure, passive, but backward, submissive and culturally imprisoned. Al-Saji (2010) concludes is that bodies are not only differentiated across cultures but also deemed inferior-superior on the basis of pre-existing power hierarchies. Hence here, the veil not only emerges as marker of the Muslim identity but an explanation of its inferiority.

The narratives of the participants in this study have highlighted that backwardness and modernity are not static and tangible - in the veil, but are schemas individuals create and attribute to the veil. The Hijab doesn’t automatically result in a transition from modernity to backwardness and vice versa- but is embedded in ideology.

The participants also discussed the trickledown effect the politicized veil in the media and state politics has had on their everyday experiences as a Hijab wearing Muslim woman. All participants were infuriated by the politics of extremities being imposed on women worldwide-stating that banning-compulsory veiling denies women their constitutional right to freedom, and robs them of a life of dignity. They attribute this to the pre-existing power hierarchy where the west is constructed as the knower and the East as objects of study- to be labeled. The second element highlighted across the interviews was that question of bodily integrity. Some of the educated participants discussed how religion has transformed from a system of faith to a tool of patriarchal control- where women have been forced to cover up under religious pretext.

### **Discussion and Policy Implications**

The veil is more than a mere descriptive identity marker- being embedded in religion that infuses historically and culturally coded meanings into them- ontologically transforming it into power connotative markers. It emerges as a protective measure to negotiate and navigate within an inherently patriarchal society and is a crucial identity marker for women who practice Islam, but cannot be used as a yardstick to measure religiosity nor agency. The veil by itself is neither oppressive nor emancipatory but becomes so within the dynamic social landscape. Thus, the Hijab is a religious, cultural and gender construct- where it protects women from the patriarchal order while simultaneously acting as a tool of patriarchal control.

It is important to note that global policies that delve into extremities of compulsion and banning of the veil- both construct women as docile bodies to be controlled-denying women their rights and agency. This leads to the question of whether there exists a middle ground between liberal ideation and multiculturalist preservation. Perhaps, then, there is no way in this life-world to access that space beyond the veil. Perhaps the burden of identities we carry cannot be left behind, cannot be transcended. But if this brief foray into the multiple, multivalent critical engagements around veiling has engendered any insight, it is that we can, through diverse ways, transform this 'burden' of identity into a site for struggle: a struggle against imposed, reductionist identities; and a struggle towards identities that are fluid, interconnected, not demarcated from the Other but flowing into the Other, shifting, contextual, open to corrections, and which create possibilities of imagination and re-imagination. Can we then re-imagine veiling practices as not just ascribed or received, but rather as discursive exercises we engage with at multiple points in our lives, as opportunities for reflexivity? Can veils become the gears to drive forth our 'becoming', rather than demarcating our 'being'? Can we allow our religiosity, gender expectations, and social acceptance - to be shaken, broken, shattered, and reinvented - along with ourselves, our identities?

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Vijayalakshmi B\*

## Gender and ICT - An Indian perspective

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### Abstract

*Globally, Information Communication Technology (ICT) has proved to be a powerful enabler in transforming people's lives. India is no exception to it. The advantage of demographic dividend and an enabling environment for promotion of digital initiatives fuel the growth of ICT access and use in the country. The pointers that substantiate the ICT growth story in India include rapid ICT proliferation, improved affordability and access, growing capacities of ICT use, increasing demand for value added services and meaningful use of ICT. While the overall ecosystem shows an appreciable growth, concerns exist when it comes to equitable distribution of ICT benefits in the country, especially on the gender front. The scarce gender disaggregated data available for ICT indicators throw light on the gender digital divide where women are positioned disadvantageously when compared to men in terms of access, ownership, capacities, use and cybersafety. Bridging the gender divide in the digital world through a focused and concerted action, especially for the rural and poor sections, is imperative for India to achieve an equitable and inclusive growth.*

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### INTRODUCTION

We live in a knowledge economy where Information Communication Technology (ICT) is reckoned to be an indispensable enabler for fast forwarding development. ICT consists of hardware, software, networks and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images)<sup>1</sup>.

The utility of ICT for development is ever expanding and transformative. Technology that once was relevant only for large-scale business entities is now an integral part of day-to-day life of a common man. Technology development and integration is leading to smarter applications, processes and devices that are more robust, interoperable, ubiquitous and efficient. Besides the exponential economic gains, the social gains accrued through the use of ICT is also gaining importance.

Realising the significant role that ICT can contribute towards advancing development, the 2030 Agenda for Sustainable Development recognizes ICT as a

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crosscutting theme and has outlined definite targets under four of the SDGs - Quality Education (Goal 4), Gender equality (Goal 5), infrastructure (Goal 9 - universal and affordable access to the internet) and Partnerships and means of implementation (Goal 17). The Goal 1.4 also outlines the targets to ensure equal access to appropriate new technology by all men and women<sup>2</sup>.

India has the need and potential to mainstream ICT access and use for providing a sustainable quality of life to its citizens. Some of the compelling factors driving the need for mainstreaming ICT in India include a billion plus population predominantly comprising of youth; complex and diverse development needs; intrinsic challenges of a growing economy; and the proven transformative power of ICT in catalyzing development in the country.

India has recorded impressive results in use of ICT for development. The pointers that substantiate the ICT growth story in India include rapid ICT proliferation, improved affordability and access, growing capacities of ICT use, increasing demand for value added services and meaningful use of ICT. Moreover, the country has also witnessed rich digital dividends reaped through the use of ICT in sectors such as Agriculture, Education, Health and e-Governance.

Overall the country is on track for mainstreaming ICT use in all spheres of development. However, digital divides specifically gender divide, caused due to several economic and social conditions, challenge the equitable and inclusive use of ICT in the country.

The paper presents the Gender and ICT scenario in the country and suggests measures that could accelerate an inclusive ICT use to achieve sustainable development.

## **Gender and ICT use in India - present status**

India has made significant progress in promotion and use of ICT for development. The International Telecommunications Union's (ITU) ICT Development Index (IDI) is one of the globally accepted tool to measure and monitor progress of ICT proliferation in a country. The three major indices of IDI are ICT Access, Use and Skills<sup>3</sup>. To understand the present status of ICT proliferation from a gender perspective, a look at the gender disaggregated data of these major indicators has been attempted and is summarized as follows.

### **A. ICT Access**

ICT access indicators present the ICT connectivity status of the population in our country. The penetration of mobiles has been spearheading the ICT access revolution in India. Competitive cost of devices and service packages and flexibility in usage fueled by the facilitating role of the government are considered key reasons for mobile revolution in India.

The ICT access profile of the country is as follows.

1. More than 95percent of the Indian households have access to atleast one ICT asset - Radio / TV/Computer /laptop/mobile<sup>4</sup>.
2. Telephony or more precisely mobile telephony is the preferred medium for communication among Indians. As on March 2018, the total telephone subscribers in India were 1,206.22 million of which 98 percent were mobile (wireless) subscribers. The overall Tele-density was 92.84 percent with urban recording 165.90 percent and rural 59.05 percent<sup>5</sup>.
3. About 57 percent of the mobile subscribers in the country were urban and the rest rural. However, the monthly growth rate of rural subscribers was 2.84 percent when compared to 1.87 percent of urban mobile subscribers<sup>5</sup>.
4. When it comes to ownership of mobiles, men outnumber women. The reported gender gap in mobile ownership among adult population in India is 23 percent. The gender gap tends to be wider in rural areas (27 percent) than urban areas (14 percent). Difficulty in reading and writing, lack of skills to use a mobile, limited availability of relevant services and affordability were the major barriers cited by women to owning a mobile.<sup>6</sup>

### **B. ICT use**

ICT use indicators throw light on how users who have access to ICT make use of it. Internet has opened an arena of opportunities for ICT users. Access to internet using the mobiles has seen a phenomenal rise in the country. The penetration of smart phones, cheaper internet plans, improving speed and availability of value added services have contributed to increasing mobile internet usage.

An overview of ICT use profile of the country is presented below.

1. The number of broadband internet subscribers in the country, as on March 2018, was 412.60 million which accounts to about 34 percent total telecom subscribers in the country. Mobile (wireless) subscribers constituted about 96 percent of the total broadband subscribers<sup>5</sup>.
2. Internet penetration in urban areas was reported to be about 65 percent and rural about 20 percent<sup>7</sup>.
3. Women constitute only 30 percent of the total internet users in India<sup>7</sup>. The gender gap reported in internet access is about 68 percent, with rural areas recording 72 percent and urban areas 63 percent<sup>6</sup>.
4. Mobile data penetration in rural areas is about 18 percent when compared to 59 percent in urban<sup>8</sup>.In urban India, women mobile internet users constitute about 40 percent as against 33 percent in rural areas. Lack of awareness about



mobile internet use; less access to internet enabled mobiles; perception that mobile internet is not relevant to them and safety and security concerns are some of the barriers expressed by women in using mobile internet<sup>6</sup>.

5. Youth are the major segment of the Indian population using mobile internet services<sup>8</sup>.
6. The International Internet bandwidth consumed per Internet user in India is 15,956 Bit/s<sup>3</sup>.

The common utility areas of ICT by a common man in India are those of information access and sharing, communication, entertainment and making digital transactions. When it comes to use of mobiles, irrespective of gender, the predominant utility is receive / make voice calls. The initiatives of development stakeholders, especially government, to promote use of ICT for improving transparency, quality and efficiency in service delivery has expanded the scope of ICT use beyond the traditional utility areas. However, women still are less likely than men to use other services, especially mobile internet services.

Besides the barriers of access, capacities and relevance, another emerging issue that limits ICT use, especially by women, are those of cybercrimes. The National Crime Records Bureau (NCRB) Crime in India 2016 indicated that Cybercrimes have registered a sharp increase of 6.3 percent, from 11,592 reported cases in 2015 to 12,317 in 2016. Publication/ transmission of obscene / sexually explicit act in electronic form, Breach of confidentiality / privacy, Cheating / Fraud, etc are some of the reported cybercrimes<sup>9</sup>.

### ***C. ICT skills***

ICT skills index provides insights on the skill sets / capacities of citizens to effectively and meaningfully use ICT. Proxy indicators such as mean years of schooling, enrollment at secondary and higher education levels are assessed to measure the ICT skills in a country<sup>3</sup>. It has been proved that education, social and economic status are influential factors related to ICT skills especially with respect to women.

Demographically, India has a skewed sex ratio with females constituting 48% of the total population. About 69 % of them live in rural areas. The literacy rate of the country is 73 % with a male literacy rate of 80.9 % and female 64.6 %<sup>4</sup>. India also has the largest youth population in the world.

As per Unified-District Information System for Education (UDISE) 2015-16, the Gross Enrolment Ratio (GER) of boys and girls at secondary level is 79.16 % and 80.97% respectively. GER of boys and girls at Senior Secondary level is 55.95% and 56.41% respectively<sup>10</sup>. Annual Survey of Education Report (ASER) 2017 findings suggest, while on average the difference between enrolment levels of boys and girls at age

14 are declining, by 18, when the state doesn't enforce compulsory education through the RTE Act, 32% girls are not enrolled, compared to 28% boys<sup>11</sup>.

According to the All India Survey on Higher Education 2017-18, enrollment in undergraduate and technical and professional courses like BTech, law or management, is skewed in favour of males and the gap is significant. In BTech, there are only 39 women per 100 men, hardly any improvement from 38 women in 2012-13. Barring MPhil and PG levels, the gap is also significant in diploma level courses with 70% male enrolment<sup>12</sup>.

The Labour force participation rate, female (% ages 15 and older) in India is only 26.8 when compared to 79.1 for male. Similarly the Estimated gross national income per capita, female (2011 purchasing power parity) is 2,184\$ as against 8897 \$ for male<sup>13</sup>.

Besides factors like education and income, the socio-cultural taboos that sideline girls and women in accessing and gaining skills also are considered to be a major barrier for women to acquire the requisite ICT skills.

### **ICT initiatives of the country**

The demographic dividend advantage coupled with pro ICT initiatives of the government in the country have been instrumental in fueling ICT in the country.

A brief indicative list of the pro ICT initiatives of the government are as follows.

1. ***Proliferation of digital infrastructure*** : Bharath Net that seeks to provide connectivity to the last mile, Common Service Centres to deliver citizen centric services within the reach of citizens; free wifi connectivity in public places.
2. ***Building digital capacities*** : The National Digital Literacy Mission / Pradhan Mantri Gramin Digital Saksharta Abhiyan with the vision to make 6 crore rural citizens digitally literate; Skill India campaign to promote skilling in the country covering various trades
3. ***Creating digital identities***: Aadhaar - a unique identity number issued to the residents of India by the government serves as an authentic digital means of verification for delivery of various social security schemes of the government. As on April 2018, about 88 % of the population has been saturated with Aadhaar<sup>14</sup>.
4. ***E-Kranti*** - A National e-Governance initiative with the objective of delivering all Government services electronically to citizens through integrated and interoperable systems via multiple modes, while ensuring efficiency, transparency and reliability of such services at affordable costs.
5. ***Digital payment options***: An initiative to make India a cashless economy. Digital transactions to the tune of 20,540 million have happened during 2017-18.

6. **Digital Agriculture:** Toll free Kisan Call center to address farmer queries; mKisan to provide information to farmers on mobiles; e-National Agriculture Market (e-NAM) a pan-India electronic trading portal for agricultural commodities.
7. **E-Health** - Online Registration system available for major hospitals; electronic health records; Mother and Child tracking System; telemedicine initiatives have enabled access of quality health services in India.
8. **Education:** Smart classrooms; online textbooks and assessment, National Scholarship portal to enable online application for various scholarships; National Mission on Education through Information and Communication Technology to leverage the potential of ICT in teaching and learning process for the benefit of all the learners in Higher Education Institutions.
9. **Smart options:** Leveraging technology to provide smart solutions to challenges in the power sector, water management, transportation and environment.

#### Certain women specific digital initiatives include

1. **Support to Training and Employment Programme for Women (STEP):** An initiative to train women with no access to formal skill training facilities, especially in rural India.
2. Alarm button on the mobile
3. **SHe-Box** to enable women employees of the central government to file complaints related to sexual harassment at the workplace. Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 to include online crimes.
4. **Women Entrepreneurship Platform (WEP):** a unified access portal which brings together women from different parts of India to realize their entrepreneurial aspirations.
5. **Udyam Sakhi portal for women entrepreneurs:** a network for nurturing social entrepreneurship creating business models revolving around low-cost products and services to resolve social inequities.
6. **Mahila E-Haat:** an e-market place initiative for meeting aspirations and needs of women entrepreneurs.
7. **Scholarships exclusive for girls and women to pursue technical education**

#### Road ahead for Gender and ICT in the country

The IDI 2017 ranking of India is 134 out of 176 economies. The ranking has improved over the 2016 value of 138. The highest IDI ranking (121) was in the sub-index ICT skills, when compared to the other sub-indices of ICT access (137) and ICT use (144)<sup>3</sup>. India is ranked 125<sup>th</sup> out of 159 countries in the United Nations

Development Programme's Gender Inequality Index<sup>13</sup>. A look at the sparsely available gender disaggregated ICT data also indicates that there is a long way to go for ICT to be mainstreamed to enable an inclusive and sustainable development in the country. At the same time, it is an undeniable fact that India is on track towards achieving this goal.

To fast track ICT mainstreaming in the country to fuel sustainable development, a few suggested measures are as follows.

1. Devise gender specific policy framework for ICT mainstreaming in the country that is built considering the existing gender disparities and envisions an equitable and inclusive ICT for sustainable development.
2. Generate women specific value propositions for ICT applications - appropriate content, services, processes, devices, etc. that productively engage women and thereby propel ICT use.
3. Ensure gender specific targets, giving priority to women, in all ICT initiatives taken up across the country.
4. Facilitating convergence among various ICT initiatives of development stakeholders, especially of government, so as to reduce duplication and maximize efficiency and outcomes.
5. Forge multi-stakeholder partnerships among various stakeholders of the ICT ecosystem to ensure a gender sensitive, safe and secure cyber environment for women.
6. Develop a robust MIS that collects, analyses, tracks gender segregated data of ICT indicators in the country to enable measuring and monitoring of progress made in bridging the gender digital divide.
7. Focus on overall development and empowerment of women especially of rural areas so that they are placed on a level playing field to harvest digital gains.

Bridging the gender divide in the digital world through a focused and concerted action, especially for the rural and poor sections, is imperative for India to achieve an equitable and inclusive growth. It is only then that every citizen of the country would be on board the Digital India express.

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## Are Technologies (Gender)-Neutral?: Politics and Policies of Digital Technologies

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### Abstract

*Empowering all women and girls is not only one of the important Sustainable Development Goals (SDGs), but also an integral part of all other SDGs (UN Women 2018). Technology at large and latest digital technologies in particular, are often considered to be an essential tool in addressing issues of women's empowerment and gender equality. However, such overarching reliance on technology as a developmental tool often gives technology a neutral appearance. This garb of neutrality, on one hand, obscures the politics entrenched within its material properties and its representational meanings (Winner 1980) and on the other, it puts the burden of technological failure on social, political and cultural factors. In this paper, we set out to unmask this claim by revealing the politics of gender as embodied in technological artifacts which is further embedded in its recurrent use (Orlikowski 2000).*

*In doing so, we draw on a feminist standpoint theory (Harding 2004) and present a range of case studies, to show how historically the relationship between gender and technology has played out and how, even the latest technologies, such as, Artificial Intelligence (AI) continues to play out the politics of gender. While AI is being touted as a future norm of our everyday experience, many studies have already shown that algorithms governing these AI systems often reproduce or reiterate human biases and gender biases are no exception in that case (Bolukbasi et al., 2016; Zhao et al., 2017). These biases could result either from the data which is used to feed and train the algorithms, or due to an overtly male-dominated industry that is responsible for innovations in this domain (Fagella, 2017; Furness, 2016).*

*We connect these cases to gender disparity in global technology industry and the overall workforce participation in India (Catalyst 2017) to argue that both production and consumption of technology represent a similar kind of gender politics. Hence, both policy makers and industry representatives need to focus more on the political potentials of these technologies rather than recommending them as a blanket solution for empowering women in India. The broader objective of the paper is to inform policy-makers and development practitioners about the dangers of the perceptions that technologies are (gender) neutral.*

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## INTRODUCTION

At the 59th Session of the Commission of the Status of Women at the United Nations in 2015, Secretary in India's Ministry of Women and Child Development Vinay Sheel Oberoi declared that "Enabling use of ICTs tools in advancing gender equality and empowerment of women would be a game changer in this process and help overcome the digital divide," (Firstpost 2015). This official statement is emblematic of two things; firstly, India's policy commitment to gender equality in keeping up with sustainable development goals (SDGs), secondly, its reliance on ICTs as a "game changer" in achieving gender empowerment. Moreover, the position taken up by Indian policy makers also fits into the broader agenda of SDGs. As per SDG Goal 5 achieving gender equality and empowering all women and girls by 2030 is an important milestone and under this broader goal, the subsection 5.B aims to "Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women". However, the indicator of this target is taken to be "Proportion of individuals who own a mobile telephone, by sex" (United Nations 2017). Thus, the sub-goal as well as the indicator show an emphasis on physical access to technology as way to empowerment. Similarly, in India, in most of the policy documents, such as, Information Technology Act, 2000, Broadband Policy, 2004, Universal Service Support Policy/Universal Service Obligation (USO) Fund, 2000 and flagship programmes such as, National e-Governance Plan (NeGP), 2006, Digital India Programme, 2015, we witness this undying faith in digital technologies and its potential for achieving development goals.

These overall policy frameworks and development practices fall into the larger discourse on digital divide that takes physical access to technology as a prerequisite for participating in the social and economic systems. Despite its continued prominence in the policy domain, digital divide as a concept has long been criticized by scholars studying the relationship between technology and development (DiMaggio and Hargittai 2001, Warschauer 2002). The critique of digital divide hinge on three main points: firstly, it emphasizes physical access at the expense of other resources necessary for meaningfully using ICTs; secondly, it underplays the degrees of access that different groups have (depending on their social position) in portraying the issue as a binary of "haves" and "have-nots"; thirdly, it presupposes a causal relationship whereby technology leads to positive transformation instead of looking at how technology and society co-constitute each other (Warschauer 2002). We take these points as a starting point of our paper to argue that rather than focusing narrowly on ICTs "as an external variable to be injected from the outside to bring about certain results" (ibid), we need to understand ICTs as interwoven in the complex social systems and processes (ibid). However, in moving away from the notion of digital divide, we do not argue that technologies do not matter and social factors only determine the effects of technology. In fact, what we emphasize is that technologies do matter in the way they embody possibilities of inclusion and

exclusion and hence shaping trajectories of social transformation. This way, we allow ourselves to debunk the neutral appearance of technology. The garb of neutrality, on one hand, obscures the politics entrenched within its material properties and its representational meanings (Winner 1980) and on the other, it puts the burden of technological failure on social, political and cultural factors. In this paper, we set out to unmask this claim by revealing the politics of gender as embodied in technological artifacts which is further embedded in its recurrent use (Orlikowski 2000).

In doing so, we first draw on theories of technological politics (Winner 1980) and feminist standpoint theory (Harding 2004) to show how gender and technology co-produce each other by unraveling the its political potentials. To substantiate these theoretical positions, in next section of the paper, we present cases to show how the relationship between gender and technology had played out historically and we further trace it to the current age of search algorithms and word embedding technologies. In the following section, building on these cases, we question the implications of relying on gender-neutral technologies as a vehicle of gender equality in the development context. We conclude by that given the growing gender disparity in the workforce participation in India (Catalyst 2017), both policy makers and industry representatives need to focus more on the political potentials of these technologies rather than recommending them as a blanket solution for empowering women in India. The broader objective of the paper is to inform policy-makers and development practitioners about the dangers of the perceptions that technologies are (gender) neutral.

### **Gender, Politics and Technology: Deconstructing the Neutrality Narrative**

Recognizing the political attributes of technologies requires us to look at the intersection of production of knowledge and practices of power, which we do through the lens of feminist standpoint theory. Challenging the conventional assumption that “politics can only obstruct and damage the production of scientific [objective] knowledge (Harding 2004, pp.1), feminist standpoint theory embraces politics by laying bare the normative bases of the dominant knowledge systems and its underlying politics and biases embedded within (Haraway 1988; Harding 1995). Harding (1995) explains that the subjective experiences of men, who have also been the producer of (objective) knowledge, have subtly injected into their work by rendering them inadvertently the dominant species in any process of knowledge production. She further argues that it is a long shot for the dominant species to look at situations from a subjugated group’s standpoint. But for a submissive group, it’s relatively easier to look at situations from both perspectives. Consequently, it [standpoint theory] helps to produce oppositional and shared consciousness in oppressed groups - to create oppressed peoples as “collective” subjects of researcher rather than only as objects of others’ observation” (ibid, pp.3).



Since social order and its concomitant power arrangements looks different from different social position, we argue that gender shapes the ways in which we experience, know and interpret the world. This, in turn shapes the kind of knowledge we produce and the technologies we develop.

In his seminal article “Do Artifacts Have Politics?”, Langdon Winner (1980) elaborates two ways in which technological artifacts contain political properties, that is, they denote a certain kind of arrangements of power and authority within society. Firstly, the design or specific properties of artifacts may cater to certain kind of social interests, while excluding the others. Here, Winner (1980) refers to artifacts, “in which the very process of technical development are so thoroughly biased in a particular direction that it regularly produces results counted as wonderful breakthrough by some social interests and crushing setbacks by others” (pp.125). An example of this kind of technological politics can be seen in the early design of safety airbags in cars, which was subject to gender bias. In 1993, following up on a dictate from the US National Highway Traffic Safety Administration that the rate of force for airbag deployment had to be strong enough to protect an unbelted, average adult male, car designers did not test their airbags on dummies of the average weight and stature of women or children leading to injuries and deaths of these sections of the population (Cech 2014). Secondly, technological systems may encompass more rigid forms of politics whereby they either require or are compatible with certain kind of power arrangements. Such technologies are often called inherently political. For example, given its lethal properties, atom bomb requires an authoritarian system of control and organization. In the first case, biases can be corrected and power arrangements can altered by tweaking the design of the artifact, whereas in the latter case the choice of adopting a technology goes hand in hand with a certain political stance. Following in the same understanding, Berg and Lie (1995) in their paper, “Feminism and Constructivism: Do Artifacts Have Gender?” rely on the political critique of technological determinism, advanced by Winner (1980) but imbue it more specific feminist questions. They ask a more fundamental question of theorising feminist politics in technology studies to show how the production and practices of technology together create a politically gendered paradigm within which the relationship between women and technology are essentialised, mostly in negative terms.

Drawing on feminist standpoint theory and theories of technological politics, we argue that gender shapes the ways in which technology contains political attributes. In other gender shape the ways in which technologies create, endorse and reproduce power relations across the gender axis. In the following section, we explicate theoretical argument by illustrating a few empirical cases.

### **“Gender in” and “gender of” technology: Seeing as doing**

Feminist standpoint theory is not just a theoretical but also a methodological framework for doing feminist research that takes up a political stance in favour of the “oppositional consciousness” (Hardings 2004, Hill Collins 1986). This implies that while we deconstruct the empirical cases of technologies, we look for this “oppositional consciousness”. Thus our seeing of the biases itself becomes the doing of the feminist research that we undertake in this paper. This, re-reading of existing technological artefacts becomes our methodological approach that is rooted in feminist standpoint theory.

Now, the question remains how do we articulate when we encounter gender as entangled with technology. To this end, we borrow Faulkner’s (2001) concept of “gender in technology” and “gender of technology”. The former is when gender relations are embodied in the artifact and the relations are reinforced within the society through this artifice thus forming a symbiotic relation between gender and technology. Berg (1999) shows how Smart Home prototypes in 1990s ignored women’s housework as a space for innovation while conceptualising future homes with integrative technology. Thus, innovation in household technologies were to satisfy the wishes of male designers rather than those of women house workers (Berg 1995). We mentioned another similar example earlier where airbags in cars completely ignored women drivers in their design. Such examples also follow what Winner (1980) said about technological politics, where in the (gender) bias or interests of a certain group is embodied within the properties of the artifact.

The latter case, where artifacts are labelled according to frequency of use or by association than by embodiment (Faulkner, 2001) is known as “gender of technology”. An example of “gender of technology” would be the microwave which was initially designed for bachelors for the simple purpose of heating. The assumption was that men wouldn’t be interested in cooking and hence was the design as such. But when the target audience expanded to housewives, the design was tweaked to suit their needs and interests (assuming women are interested in cooking) and more features for cooking were added (Cockburn and Ormrod 1993, Ormrod 1994). Here, even though material properties of the microwave do not exclude or include one gender over the other, its design is nonetheless shaped by the gendered division of labour at home and in society at large.

These historical studies on gender, politics and technology alert us to the need to look beyond the seemingly gender neutral technology and to actively seek out gender biases that may underlie these technologies. With the awareness of historicity of the relationship between gender and technology, we now look at contemporary technologies of artificial intelligence (AI) and machine learning (ML) which are burgeoning in use and influence in the regular decision making process. While AI/ML are being touted as indispensable technologies controlling all our major decision-making processes, such as recruitment, policy-making and so on, we should also

consider the underlying politics that these technologies may bring forth. Some studies have already analysed various ML algorithms to demonstrate how social biases are reflected and even enhancement through these algorithms (Bolukbasi et al., 2016; Zhao et al., 2017). In this paper we showcase two such cases where gender bias have been identified in seemingly neutral AI algorithms: first the *LinkedIn* search algorithm and the second case is the bias in the very commonly used *word2vec* word embedding technique. Algorithms are pieces of code written effectively to fulfil a set of tasks; AI/ML algorithms learn from the data available to them, that is, they acquire past user data, create a pattern and predict future steps of that user.

***LinkedIn Case:*** LinkedIn is a social networking platform for professionals and is extensively used for job hunts and connecting with other professionals with similar interests. It is a neatly digitised version of your Curriculum Vitae and allows you to connect with other users (similar to a friend request on Facebook). These connections can endorse your skills to others as well. Using a LinkedIn account, you can apply to jobs on other portals or even look up a person for cross-verification. A LinkedIn account also allows you to hire certain people based on their skills by looking them up in its search bar. In September 2016, Seattle Times published an article demonstrating the apparent gender bias in LinkedIn’s search algorithm (Day,2016). When a user typed in a female name in the search box, for instance “Stephanie Williams”, LinkedIn’s search algorithm would correct him asking him if he actually meant to search for a male named “Stephen Williams”. The case that there were considerably less female profiles named “Stephanie Williams” is ruled out as there were roughly 2,500 such profiles. This also wasn’t a one-odd case as at least a dozen other common female names were “corrected” by the algorithm and it became clearer that a gender bias existed in LinkedIn’s search algorithm<sup>1</sup>

The case of LinkedIn is one of many studies being published, that inform us that the algorithms being developed and used in important policy making and business decisions aren’t free of societal biases. As these algorithms feed on data from the real world, most of these biases are a reflection of the social biases we encounter on a daily basis. For example, LinkedIn’s algorithm is learning from the daily searches that happen, and if a higher percentage of searches happen for “Stephen” rather than for “Stephanie” then it feeds itself with this information, and combined with the algorithm which isn’t built to combat these biases, it prompts the user with the male name when “Stephanie” is typed in.

LinkedIn algorithm’s search bias can be termed as a case of “gender in technology”. The algorithm, although learning from data, certainly seems to have biases incorporated within it and these biases are reflected upon use and are eventually

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<sup>1</sup> LinkedIn’s algorithm is proprietary which implies that it isn’t available for public viewing. Hence, the algorithmic bias (or in other words, the technical bias) was manifested in the output, that is, the search results.

reinforced in the society when an employer is looking to hire. But even if we do make the assumption here that the algorithm used by LinkedIn is gender neutral, it is still ignores the bias that exist in the data and thereby enhances gender inequality. Gender neutral algorithms that do not take into consideration the biases that exist in the society and thus in the data thus create technologies and associated practices that are far from gender neutral. Such examples point out the need for feminist research in promoting gender-sensitive algorithms which can potentially reduce the further transfusion of gender bias.

**Word2Vec Techniques:** Word2Vec is a word embedding framework used extensively in machine learning and natural language processing (NLP) to represent text data as vectors. The aim is to encode words into machine-comprehensible language in the simplest way whilst understanding the semantics of these words and phrases and also the relation between a pair of words, that is, how closely are they related. These relations are themselves calculated using a machine learning algorithm and these embeddings are further used in several AI and NLP algorithms.

Bolukbasi et al. (2016) explore the gender biases in these co-relations in their paper titled “*Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings*”. Word embeddings calculate the co-relation between two word by calculating the distance between the pair of given words. For example, given that man:woman::king:?, the calculated word embedding would be queen. But these embeddings also portray prevalent sexist beliefs like, man:woman::computer-programmer:?, gave homemaker as the resulting word embedding (Bolukbasi et al., 2016).

| Female Occupations | Male Occupations |
|--------------------|------------------|
| Homemaker          | Maestro          |
| Nurse              | Skipper          |
| Receptionist       | Protege          |
| Librarian          | Philosopher      |
| Socialite          | Captain          |

This is yet another striking case of how the prevalent gender biases in our patriarchal society can seep into algorithms through the data that is being used to teach it.

While LinkedIn served as an example for a “gender in technology” situation, this can be understood as a subtle mix of the two. The data is initially classified and paired in a very gender by association method, for example, when we see how the algorithm predicts man for computer programmer and woman for homemaker. But this technique is used in several other algorithms rendering them to embody gender bias and thus becoming examples of “gender in technology”.

Again here, the technique of embedding is very gender neutral. Drawing upon the chunks of biased data available to it, the algorithm reinforces these to an extreme extent. With AI/ML increasingly assuming an important role in both private and public organizations and services across different domains of life, it is important for us to consider the far-reaching implications that these biased algorithms might have on the already marginalised sections of the society.

### Discussion: Gender(ed) Politics of Technology

Above examples clearly demonstrate the intertwined relationship between gender and technology and how politics of gender may easily be mapped into politics of technology. This brings us back to the larger issue that feminist standpoint theory raises: the relationship between production of knowledge and practices of power, and in our case, more specifically to the production/design of digital technologies and how practices of gender inequality imbue these technologies with the certain relations of power and authority. It impels us to ask a few simple questions: who are designing these technologies? Whose values and experiences are represented in technology? What dichotomies and stereotypes are repeated in technologies and technological culture?

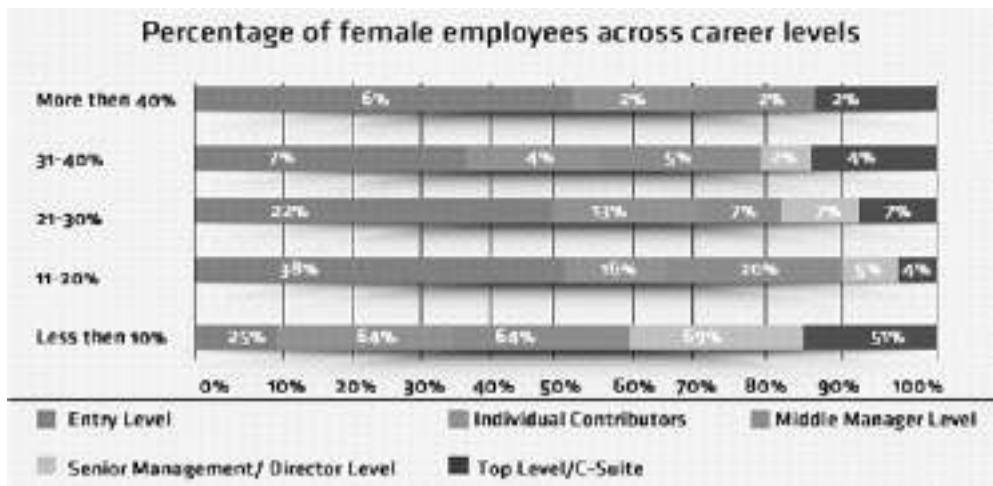
Taking on these questions, we can easily draw on the existing problem of gender disparity at IT workplaces that further shape the kind of gender biases that technologies may contain. According to a study by Price Waterhouse Cooper, in the US, the percentage of women who graduate with a degree in Computer Science has dropped to 18% (as of February 2017) nationwide, when compared to 37% in 1985 (PwC Report, 2017). If we look closer home at the Indian technology companies, at the entry level there is significant number of women engineers (about 30-40%), however, the ratio starts to dip drastically as their career progresses (Nagpal 2017). Furthermore, men and women who start their career in IT companies in India at a similar ages but women progresses slowly, leaving men at senior positions younger than their female counterparts in similar position (NASSCOM 2017).

Figure 1: Gender Representation in India Inc.



Source: Shyamsunder et al. 2015

Figure 2: Gender Representation in Indian IT Companies



Source: *Women And IT Scorecard - India, NASSCOM 2017*

The key findings from Indian IT companies highlight three important points: overall women’s representation is skewed in the sector which keep getting thinner as we go to the top level; while a large number of women quit post-maternity to never return, women who stay back moves away from core engineering roles to other functions; women’s progress within the companies are much slower than their male counterparts. To worsen the matters, gender pay gap in India also pretty high (Paycheck India 2013). More importantly, the more educated is a women, the wider is the gender pay gap and as women advances in their career, gender pay gap increases (ibid).

It is in the context of above facts and figures, that we need to understand the question of women’s participation in technology at large. By this we mean, women’s ability to meaningfully engage with technology, both as a producer/designer and as a user/consumer. From the analysis of the empirical cases (historical and contemporary), and from the women’s representation in the industry, we argue that women’s access to technology is a much broader issue than mere access to physical technologies. This is not to deny that women’s access to technology is an important issue, especially when 60% of countries have yet to achieve gender equality when it comes to access to technology (United Nations Educational 2010). A recent study by Evidence for Policy Design (EPoD) at Harvard Kennedy School and the Institute for Financial Management and Research (IFMR), India showed that only 33 percent of Indian women as against the 67% of their male counterparts use mobile phones (Pande and Schaner 2017). Keeping these figures in mind, we rather argue that we can neither understand the problem of access nor solve it without questioning the power relations that exit well within the technological artifact as well as in the practices around technology.

## Conclusion

When we try to engage with technology as object of study, we find men in a dominant position as designers, as teachers and as experts in political debates. Also in everyday life, we tend to associate men more with machines: cars, computers, and so on (Berg and Lie 1995). Thus, both within technical communities and in everyday practice, we see strong gender stereotypes associated with technology. Such stereotypes often associate technology with either heavy machinery or computers and similar artifacts which invariably carries an overtone of masculinity and ignores technologies connected to women's work, such as housework and office work (Berg and Lie 1995). This is one of the reasons, we discussed earlier that innovators did not pay much attention to household technologies while conceptualizing smart homes for future (Berg 1999). Stereotypes associated with technology also often paint women as laggards or phobic for adopting new technologies. Both kind of stereotypes present an essentialist relationship between gender and technology whereby men are believed to be pro-technology and women as technophobic or weak adopter. However, as we discussed in the previous section that such stereotypes stem firstly, from low representation of women in technical education, technology industry and technology design which secondly, lead to exclusion or alienation of women as users due to gender bias being embodied in technical systems. "Faced with technologies that do not suit their needs or interests, users tend to protest or avoid them. An entirely appropriate response or critical protest has often been confused with techno-fear" (Berg and Lie, 1995: 340). In their 1995 article, "Feminism and Constructivism: Do Artifacts Have Gender?", Berg and Lie states that if we look at technology mainly used by women, "we [would find] women loving their washing machines and mobile phones, we [would find] women critical of the inflexible systems in their computers, and we [would find] women who were indifferent to telephone answering machines and videotext systems" (pp.341).

But how do we break this chain of thoughts and practices where on one hand, women's relationship to technology is essentialised in negative terms, and on other hand, women's ability to use technology is considered to be a key solution. First and foremost, policy makers and development practitioners need to understand that the relationship between gender and technology should not be taken for granted and that the details of how specific technologies accommodate/challenge/reiterate gender relations must be analysed within their contexts. This way, we will not look toward technology as panacea for empowering women. Instead, we will focus on improving women's position vis-à-vis technology. This will imply that we consider women's role as producers and users of technology as connected and not as isolated matters. To this effect, when UN Women comes up with new draft Strategic Plan (2018-2021), it categorically says that "current trajectories and existing interventions" that allow "business as usual" will not be enough for breaking the stereotypical relations between gender and technology. Hence, we need to focus on "integrating gender issues within [technology] innovation; promoting women as

innovators and entrepreneurs; and investing directly in technology-driven innovative solutions that meet the needs of women and girls” (UN Women 2017). It is only by destabilizing the overall gendered power relations that exist in the production of technology that we may hope to liberate the consumption space for women. Hence, while recommending cutting edge digital technologies as a blanket solution for empowering women in India, both policy makers and industry representatives need to focus more on the political potentials of these technologies.

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Ratna Anjan Jena\*

## Women Entrepreneurship: A synoptic view

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### Abstract

*Entrepreneurs have been critical drivers of growth of the national economy through their innovation and job creation. Promotion of Women's Economic Empowerment (WEE) is required for gender equality, eradication of poverty and inclusive economic growth. The impact of women's economic empowerment directly benefits family and society as a whole. Fostering of women entrepreneurship is a key way of redressing gender inequality and the associated impediments to equitable, inclusive and sustainable development. This paper attempts to visualise the situation of women entrepreneurship in India on the basis of the Sixth Economic Census (SEC) data. The efforts of Ministry of Women and Child Development (MWCD) as a nodal agency in promoting women entrepreneurship through schemes such as RMK has also been mentioned.*

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### INTRODUCTION

One of the most important major driving forces for reduction of poverty and accelerating economic growth, in the world over, is seen as the promotion of Women's Economic Empowerment (WEE). The progress of a nation is determined by the empowerment of women especially economic empowerment. In India, women constituting around 48.46% of population are valuable human resources and their socioeconomic development is imperative for sustainable growth of the economy and equal gender development and inclusive economic growth. In the national economy of our country entrepreneurs have been critical drivers of growth through innovation and job creation. However, women have been at the back foot as far as their contribution to economic activity is concerned. To make women politically empowered, the Government has increased reservation (quota) for women in *panchayats* – rural local self-government bringing women into the political fold in quite a large number, but along with political empowerment, women have not achieved economic empowerment.

The World Economic Forum's Gender Gap Report 2017, provides scores on Global Gender Gap Index (GGI), which examines the gap between men and women. India has ranked 108th in the year 2017 slipping from 87th in the previous year (2016).

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The worsening of the GGI in the year 2017 compared to that of the year 2016 has occurred mainly because of the low score in the sub index Economic Participation and Opportunity (0.376) as compared to a higher score (0.683) of the same in 2016. The score in economic participation by women has significantly declined. This may be in turn due to the low female labour force participation rate (LFPR) in this category. It is a well-known fact that the gender disparities remain deep rooted, when it comes to female labour force participation. As per Census 2011, the workforce participation rate (WPR) for females is just a meager 25.51 percent at all India level whereas WPR for males is at 53.26 percent. The NSS Survey on Employment and Unemployment Situation in India (EUS) for the year 2011-12 has shown similar results with only 219 females working per 1000 females and, on the other hand, the same is 544 per thousand for the males. As per the Employment and Unemployment Survey, 2011-12 of the NSSO, LFPR for female is 22.5% and that of male is 55.6%, indicating a low LFPR for females compared to males. In India, women are mostly engaged in unpaid household and care work, which are not captured in the official statistical system. Also, on an average, a woman in India earns less than a man and their share of daily unpaid work (household chores, care of children and sick etc.) is 65 percent while it is only 11 percent for men.

The most critical theme that our nation needs to focus is on economic empowerment of women, as it is clear that women are, and will continue to be, powerful drivers of development. Studies have shown that raising the level of female employment to that of male can have a direct impact on GDP growth and increase of productivity. First, women mostly invest their income in education and well-being of their children and family. This improves the human development indicators of a household and leads to greater productivity of its family members. Secondly, women use their income to accumulate assets and increase their economic security.

India is growing as one of the largest economies of the world. The growth would have been more if there were no gender inequalities in economic participation. The structural and social hindrances limiting women's economic participation across the country has obstructed the nation from greater socio-economic growth beneficial for all elements of society

In the national economy, Micro, Small and Medium Enterprises (MSMEs) employ more than 60 per cent of the national workforces. Entrepreneurship is a key way of redressing this gender inequality and the associated impediments to equitable, inclusive and sustainable development. It has been realized that women's increased role in economic decision-making has positive effects on development, and they are the new engines for inclusive and sustainable industrial growth, and are the rising stars of economies in developing countries. In 2012, the World Economic Forum had recognised women entrepreneurs as "the way forward".

In our country, one of the key determinants of economic empowerment of women, that has become prominent, is women's entrepreneurship. It is a powerful instrument not only to empower women economically, but also leads to other forms of individual empowerment. It is indeed very surprising that there are more women (56.1 percent) than men (50.7 percent) in India, who are involved in self-employability as per NSS EUS, 2011-12 report. No doubt, women have started making efforts in order to contribute to economic well-being of their families, society and in turn resulting in poverty reduction by providing employment to people.

The Government of India defines women entrepreneurs' as 'an enterprise owned and controlled by women having a minimum financial interest of 51 per cent of the capital and giving at least 51 per cent of the employment generated in the enterprise to women'.

### **Women entrepreneurs in the Sixth Economic Census (SEC):**

The Ministry of Statistics and Programme Implementation does the exercise of economic Census in every sixth year covering all the establishments including those in the unorganized sector across the country. It is laudable that for the first time the SEC conducted during January 2013 to March 2014 has brought information pertaining to women entrepreneurs in India and their contribution to employment generation. The data will go many ways in helping Government to formulate its policies more effectively. The SEC in its reports has highlighted the number of establishments run by women entrepreneurs along with the number of people employed in these establishments. It has also given insights into the number of female proprietors in handicrafts/ handloom enterprises. According to Sixth Economic Census, 8.05 million out of the total 58.5 million establishments are run by women entrepreneurs, which is around 13.76 % of the total number of establishments. Out of these 8.05 million establishments, 65.12% belonged to the rural areas and the remaining (34.88%) were located in urban areas. Further, about 83.19% of these 8.05 million establishments are operated without hired workers and the remaining (16.81%) are operated with hired workers. Considering those states where establishment under women entrepreneurs are more than one per cent, it is observed that the State of Tamil Nadu has the highest number of establishments under women entrepreneurship (13.51%), followed by Kerala (11.35%), Andhra Pradesh (10.56%), West Bengal (10.33%) and Maharashtra (8.25%); UTs together have 1.14%, whereas over 4% share is recorded by the North-eastern States. When we look at the percentage of persons employed under these establishments, the state of Tamil Nadu has the highest number of persons getting employment in establishments run by women entrepreneurs (13.81%), followed by West Bengal (10.21%), Andhra Pradesh (9.85%), Kerala (8.53%), and Maharashtra (8.16%). Andhra Pradesh, though ranks 2nd in having the number of establishments, but is at the third position in employing people. The figure 2 depicts the per cent of establishments under women entrepreneurs and the percentage share of persons

employed in these establishments out of total number of persons employed in establishments under women entrepreneurship at the national level.

**Figure 2: Establishment under Women Entrepreneurship and Employment**

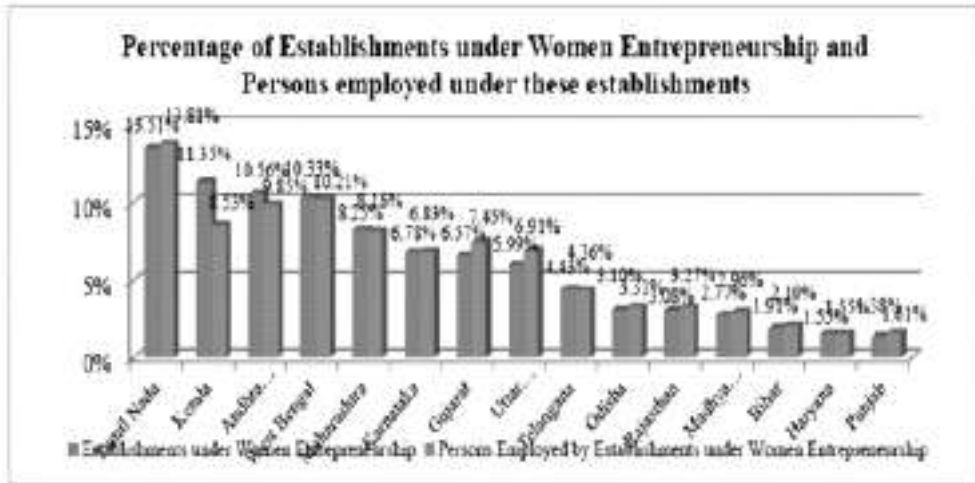
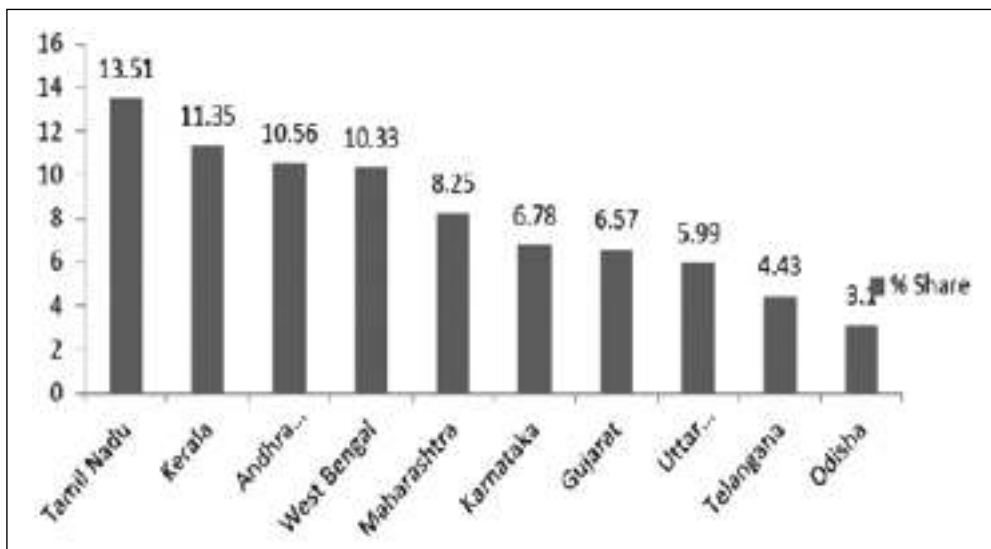
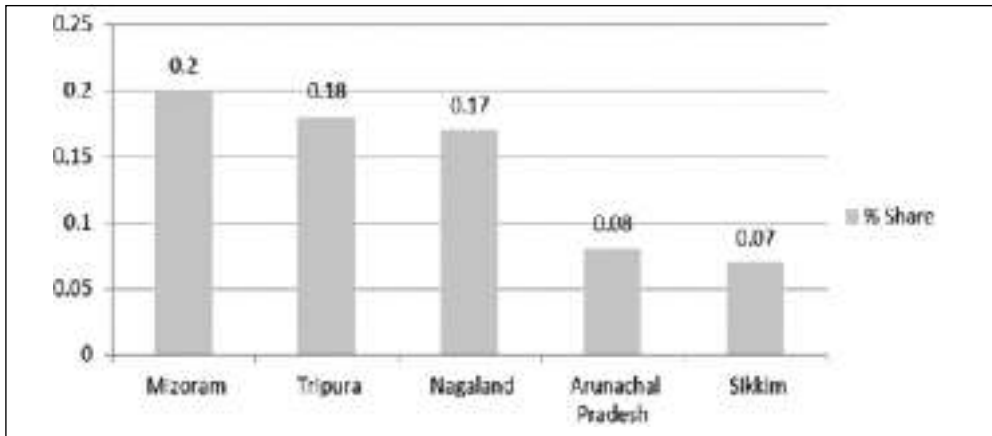


Figure 3 gives the best performing states in India in terms of women entrepreneurship. Southern states outperform the other states with Tamil Nadu, Kerala and Andhra Pradesh occupying the top positions. Figure 2.3 gives the bottom states in India in terms of women entrepreneurship.

**Figure 3: Top 10 States in women owned enterprises**



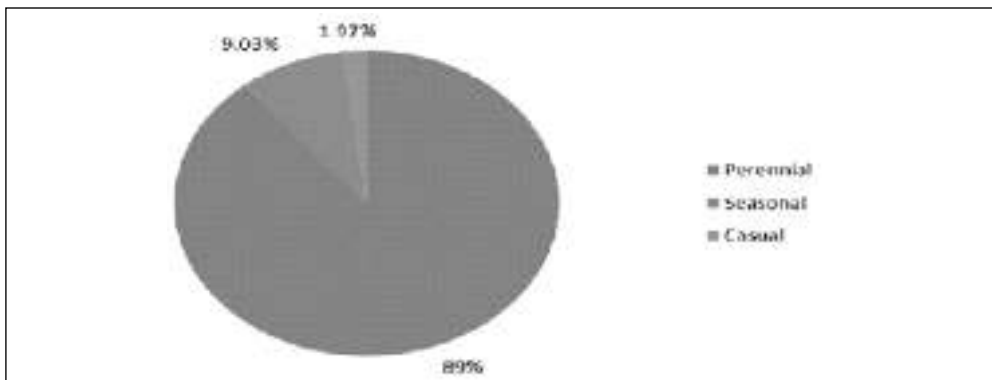
**Fig 4: Bottom 5 States in women owned enterprises**



**Nature of operation of establishments set up by women**

The establishments run by women can be perennial, seasonal and casual. The establishment is a unit situated in a single location in which predominantly one kind of economic activity is carried out and at least a part of the goods and/or services produced by the unit goes for sale (i.e. entire produce is not for sole consumption). If the entrepreneurial activity is carried on or likely to be carried on throughout the year more or less regularly, it is treated as perennial activity. If the activity of the establishment is confined to a particular season i.e. fixed months of a year, the same is called the seasonal activity. The economic activity of the establishment which is neither perennial nor seasonal is termed as casual. About 89% of the women owned establishments were perennial, 9% seasonal and remaining 2% casual (Fig-3.1). It has been found that 89.4 % of the workers work in perennial establishments and 8.95% work in seasonal establishments and remaining 1.6% works in casual establishments. Perennial establishments were 93.71% in urban areas whereas it was 86.5% in rural areas.

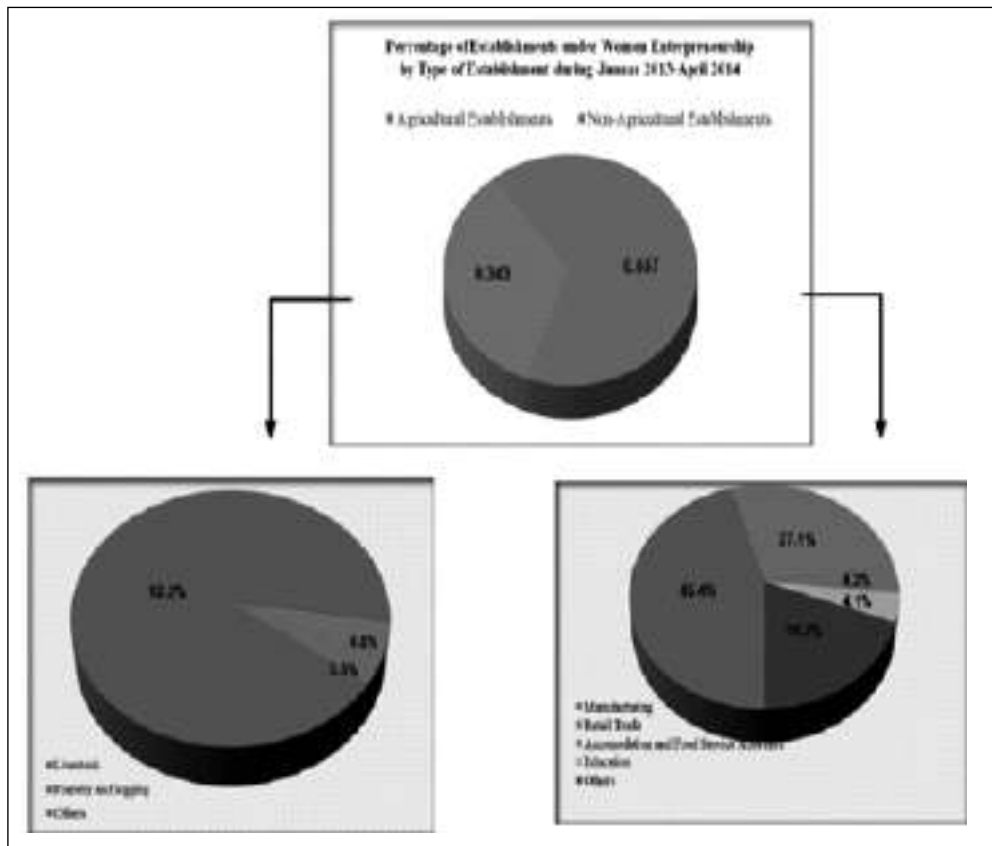
**Figure 5: Percentage distribution of establishments under women entrepreneurs by nature of operation**



### Nature of activities of establishments under women entrepreneurs

The women entrepreneurs in 34.3% of the total establishments are engaged in agricultural activities. Among which livestock activity makes up 92.2 per cent of these establishments as the main source of income. In non-agricultural sector, which constituted around 65.7% of the total establishments under women entrepreneurship, manufacturing activity has the highest share (45.4%) among the non-agriculture establishments. Figure 6 clearly gives an idea in this respect.

**Figure 6: Nature of activities**



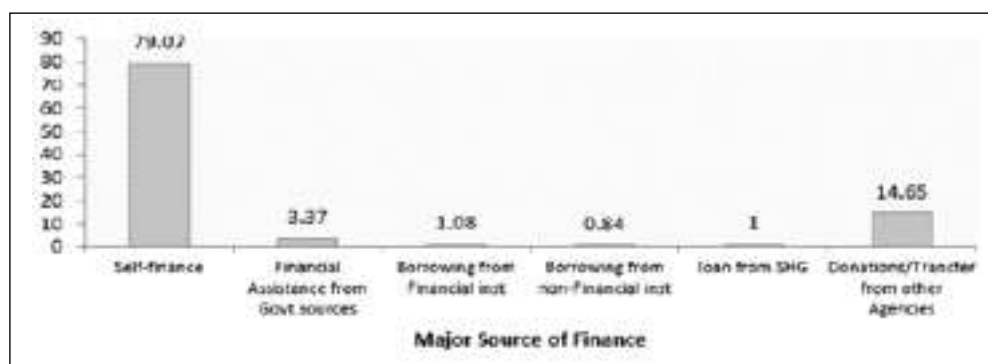
In terms of employment generation the contribution of women entrepreneurs has been remarkable. They have given employment to around 13.45 million people in the country during the period 2013-14, with 8.2 million (61.46%) persons employed in establishments located in rural areas and 5.18 million (38.54%) in establishments located in urban areas. The percentage of people that these establishments have actually employed are 30.14% in agriculture, 29.36% in manufacturing, 17.69% in trade, 5.49% in education and 5.37% in other services. Thus, women entrepreneurs have been successful in creating a steady source of income for themselves as well as for others.



## Source of Finance

It has been revealed from the sixth economic census that the major source of financing the establishment in all the states is through Self-financing. Almost 79% of the women establishments were self-financed. The second important source i.e. donation or transfer from other agencies contributed 14.65%. The next important sources were Assistance from Government and Borrowing from financial institutions with contributions of 3.4% and 1.1 % respectively.

**Figure 7: Percentage distribution of number of establishments under women entrepreneurs by major source of finance**



Source: 6<sup>th</sup> Economic Census

## Barriers faced by women entrepreneurs

It is a well-known fact that to set up an own establishment for doing businesses, both men and women have to face lot of challenges. As women lack support from all facets, like access to bank accounts, loans or credit, government support in terms of policy, laws, and services, inheritance of property, they face greater hardship to start their own business. Also, women generally lack education, skills, knowledge of technological know-how etc. And these are basic but great impediments which further pose as barriers for women to become entrepreneurs. Sometimes cultural values also confront them and women entrepreneurs get affected.

## Fostering women's entrepreneurship

It is a sad reality that women continue to be deprived of equal access to education, employment, choice of work, capital and so on thereby making their situation even worse economically. Government of India had recognized for the first time in its Eleventh Five Year Plan (2007-12) that women are not just as equal citizens but as agents of economic and social growth. And, it was articulated that any development strategy will be lop-sided without involving women who constitute half of the population, and that women entrepreneurship has to be given momentum with the

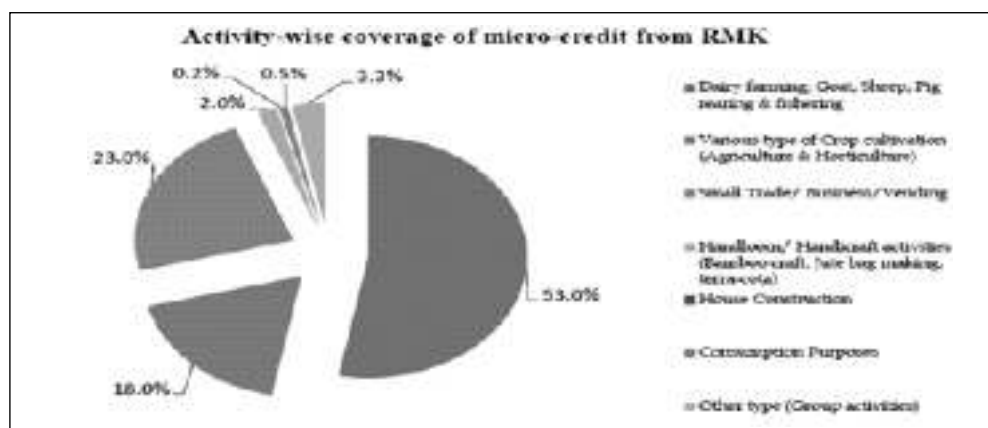
help of technological innovations, exports in manufactured goods, bringing a wide range of economic and social opportunities to them. Government's role need to be well defined in enhancing the productive capacities of women, improving overall regulatory environments to ensure inclusive and sustainable industrial development that supports gender equality, and reduction of discriminatory practices in service provisions. Scaling up of women entrepreneurial activities for better promotion and increase of women's access to business development services, technologies and finance is required. Government and society need to build education and training systems to nurture innovation and enterprising attitudes among women and girls. Women's entry to markets should be made easy and there is a need to build up their ability to fully engage in the economy.

### **Initiatives of Ministry of women and child Development**

Ministry of women and children as the nodal Ministry for welfare of women had started implementing three major schemes for developing women entrepreneurship. It is a fact that women's access to capital is the first requirement for starting any establishment. When it comes to finance, women face particular hurdles, from a lack of collateral to discriminatory regulations and ingrained gender bias. There are number of examples like Women's World Banking, Grameen Bank in Bangladesh and Accion Microfinance, Nigerian— the microfinance providers – which have shown that small loans can make a big difference for woman to be an entrepreneur. The Govt. of India in 1993 set up the National Credit Fund for Women known as Rashtriya Mahila Kosh. (RMK), a scheme under MWCD to meet the credit needs of poor and asset-less women in the informal sector. It is a society registered under the Society Registered Act, 1860 with an initial corpus of Rs. 31 crore.

The objective of RMK is to provide micro-finance services to help the needy and poor women to bring about the socio-economic uplift and to raise their standard of living, thus reducing poverty. Credit is provided to the poor women beneficiaries through Intermediary Micro-Financing Organizations (IMOs) by following a client friendly, simple, without collateral loan required for livelihood and income generation activities, housing, micro-enterprises etc. figure 8 below depicts the activity-wise coverage of micro-credit form RMK.

Figure 8: Rashtriya Mahila Kosh



As on 31.12.2015, RMK has sanctioned cumulative loans of Rs. 360.24 crore benefiting 7,35,239 women in 28 States. Out of this, a sum of Rs. 302.38 crore was disbursed. Table 1 (below) compares the percentage of establishments under women entrepreneurship and percentage of beneficiaries under RMK schemes. Here, the top States, in terms number of establishment under women entrepreneurship, are also having more number of women who have been benefited from the schemes of RMK. The State of Tamil Nadu, which has highest share of establishments under women entrepreneurship (13.51%), has the second highest number of beneficiaries (23.02%). The State of Andhra Pradesh has the highest number of women beneficiaries (26.90%) under the schemes run by RMK.

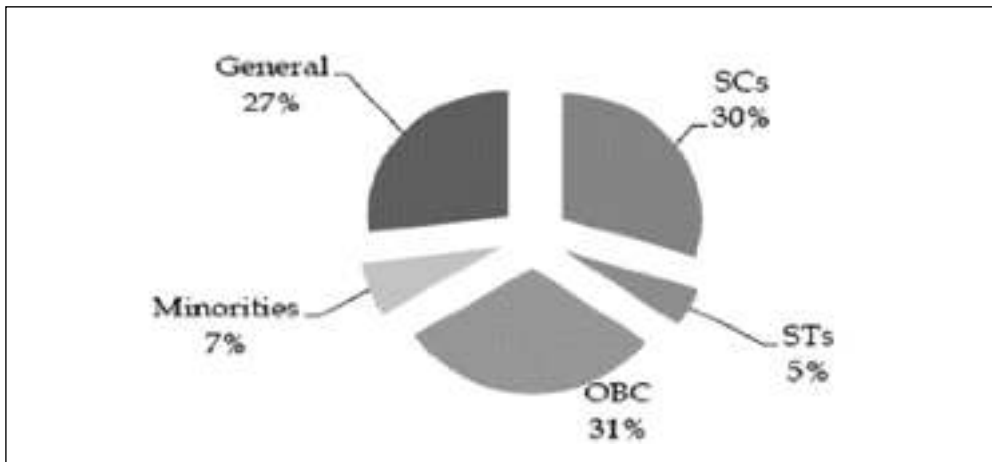
Table 1: Status of RMK

| S. No | State                     | Percentage of establishments under women entrepreneurship; | Percentage of beneficiaries covered |
|-------|---------------------------|--|-------------------------------------|
| 1     | Andaman & Nicobar Islands | 0.03   | 0.09                                |
| 2     | Andhra Pradesh            | 10.56  | 26.90                               |
| 3     | Arunachal Pradesh         | 0.08   | 0.01                                |
| 4     | Assam                     | 1.91   | 0.90                                |
| 5     | Bihar                     | 1.91   | 2.33                                |
| 6     | Chhattisgarh              | 0.97   | 0.05                                |
| 7     | Delhi                     | 0.87   | 1.05                                |
| 8     | Gujarat                   | 6.57   | 0.98                                |
| 9     | Haryana                   | 1.55   | 0.60                                |
| 10    | Himachal Pradesh          | 0.61   | 1.76                                |

|    |                 |       |       |
|----|-----------------|-------|-------|
| 11 | Jammu & Kashmir | 0.39  | 0.27  |
| 12 | Jharkhand       | 0.68  | 0.32  |
| 13 | Karnataka       | 6.78  | 2.61  |
| 14 | Kerala          | 11.35 | 4.66  |
| 15 | Madhya Pradesh  | 2.77  | 2.97  |
| 16 | Maharashtra     | 8.25  | 4.85  |
| 17 | Manipur         | 1.1   | 1.15  |
| 18 | Mizoram         | 0.2   | 0.01  |
| 19 | Nagaland        | 0.17  | 0.12  |
| 20 | Odisha          | 3.1   | 5.32  |
| 21 | Puducherry      | 0.13  | 0.04  |
| 22 | Punjab          | 1.38  | 0.07  |
| 23 | Rajasthan       | 3.08  | 4.12  |
| 24 | Tamil Nadu      | 13.51 | 23.02 |
| 25 | Telangana       | 4.43  | 4.43  |
| 26 | Uttar Pradesh   | 5.99  | 3.63  |
| 27 | Uttarakhand     | 0.39  | 0.40  |
| 28 | West Bengal     | 10.33 | 7.35  |

The percentage of coverage of different social groups under RMK loan is depicted in the figure 9:

**Figure 9: RMK loan coverage of different Social Groups**

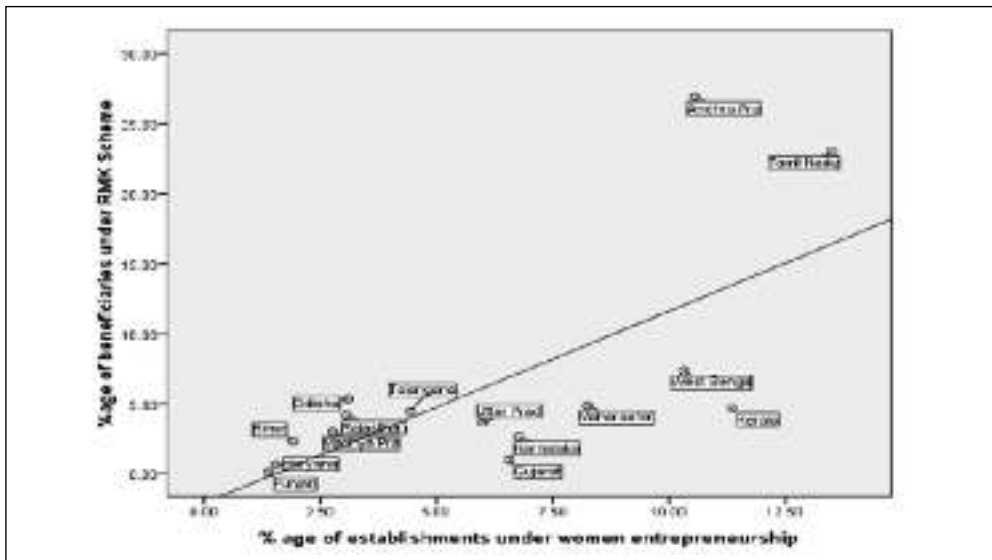


From the above figure, it can be observed that RMK actually is trying to benefit those women who are not in the main stream activities and belong to weaker sections of the society.

**Achieving the new development agenda: Way forward**

To see whether benefits or credit provided through RMK schemes have directly or indirectly resulted in large number of women entrepreneurship, we have tried to establish relationship between the number of establishments under women entrepreneurship and the RMK beneficiaries. We have taken the year 2015 as SEC was conducted in 2013-14.

**Figure 10**



From figure 10, we can see that there is a positive relationship between two parameters: benefit of micro-finance actually encourages women to become entrepreneurs. Though, the number of women entrepreneurs in the country (80,50,819) is more than 10 times the number of beneficiaries covered (7,35,239) under this scheme, it can be effectively articulated that if this scheme is effectively expanded and further implemented in all the States, it may help women entrepreneurs to establish themselves in the society.

Secondly, it is necessary that nascent businesses get support to flourish. Most women do not have that support, which helps explain why around the country they have fewer opportunities for entrepreneurship than men. They need help in selling their products, sometimes it becomes very difficult for them to access market and they do not get required customers. The Ministry of women and child development along with RMK launched a new initiative ‘Mahila E-Haat’ on 7th March 2016. This aim of this initiative is to serve as an online marketing platform for women entrepreneurs which will leverage technology for showcasing products made/manufactured/sold by women entrepreneurs. They can even showcase their services reflecting their creative potential. This unique e-platform will strengthen the socio-economic

empowerment of women. With the launch of the site itself more than 125000 women are likely to benefit. It is expected to result in a paradigm shift enabling women to exercise control over their finances by leveraging technology.

Third, women need entrepreneurial education. The concept of starting a business or entrepreneurship do not take much time to happen but research has shown that women doubt their capabilities and fear failure more than men .Training can equip women with the confidence and the required skill to continue with the idea of entrepreneurship .Ministry of women and child development had started as ‘Central Sector Scheme’, the Support to Training and Employment Programme for Women (STEP) in the year 1986-87. This Scheme aimed to provide skills that gave employability to women and provided competencies and skill that enabled women to become self-employed/ entrepreneurs. The Scheme was intended to benefit women who were in the age group of 16 years and above across the country. The assistance under STEP Scheme was available in any sector for imparting skills related to employability and entrepreneurship, including but not limited to the Agriculture, Horticulture, Food Processing, Handlooms, Tailoring, Stitching, Embroidery, Zari etc, Handicrafts, Computer & IT enabled services along with soft skills and skills for the work place such as spoken English, Gems & Jewellery, Travel & Tourism, Hospitality. However this scheme has now been transferred to Ministry of Skill Development. However we have tried to provide some data on the Step Scheme to draw the relationship between skill development and entrepreneurship.

**Table 2: Percentage of establishments under women entrepreneurship as per 6th EC and percentage of number of beneficiaries covered by STEP Scheme\***

| State             | %age of establishments under women entrepreneurship (Sixth EC) | %age of number of beneficiaries in that year |         |         |
|-------------------|--|--|---------|---------|
|                   |  | 2011-12                                      | 2012-13 | 2013-14 |
| Andhra Pradesh    | 10.56  | 2.25   | 0.50    | 6.67    |
| Arunachal Pradesh | 0.08   |  |         | 0.16    |
| Assam             | 1.91   | 1.23   | 0.46    | 2.40    |
| Haryana           | 1.55   | 5.62   | 0.54    |         |
| Jammu & Kashmir   | 0.39   | 6.18   | 3.02    | 8.90    |
| Karnataka         | 6.78   | 63.67  | 41.89   | 54.25   |
| Kerala            | 11.35  | 1.57   | 7.12    |         |
| Madhya Pradesh    | 2.77   | 1.69   | 0.36    | 4.45    |
| Maharashtra       | 8.25   | 0.87   | 2.10    |         |

|               |       |      |       |       |
|---------------|-------|------|-------|-------|
| Manipur       | 1.1   | 5.11 | 5.61  | 1.70  |
| Nagaland      | 0.17  | 0.91 | 9.06  | 0.95  |
| Odisha        | 3.1   |      | 1.64  |       |
| Punjab        | 1.38  |      |       | 11.24 |
| Uttar Pradesh | 5.99  | 5.95 | 23.46 | 0.64  |
| Uttarakhand   | 0.39  | 0.84 | 3.78  | 6.75  |
| West Bengal   | 10.33 | 2.25 | 0.45  | 1.91  |

From the data given in Table 2, we may conclude that some States like Kerala, Maharashtra and Uttar Pradesh, where the number of beneficiaries have increased from 2011-12 to 2012-13, are having more number of women entrepreneurs as compared with other States. In the State of Andhra Pradesh, which has the third highest number of establishments under women entrepreneurship, the number of beneficiaries has shot up from 2.25% in 2011-12 to 6.67% in 2013-14. The State of Tamil Nadu, which is having the highest number of establishments under women entrepreneurs, has not taken any benefit of the scheme during these years but has taken benefit during the period 2015-16.

## Conclusion

Despite progress in the status of women and economic progress of our country, marginalization of women across country remains the sad reality. Women entrepreneurship can lead to mainstreaming of women in the economic progress of the country. However, women continue to be deprived of many facilities making their situation even worse economically and they are unable to establish themselves as key contributors to the growth of the economy. Entrepreneurial establishments on one hand increase the economic participation of women by income generation and on the other, also generates employment for women. The sixth economic survey revealed that women establishments employed 13.38 million people, majority of them located in rural areas. Most of the women establishments are carrying out activities throughout the year that may provide employment and income generation on regular basis. There are however barriers for women entrepreneurs like limited education, access to technology, access to finance and societal norms of inheritance of property. Schemes or programmes need to be implemented to encourage them to start a new business and consequently to have their own source of living. Ministry of Women and Child Development have schemes like Rashtriya Mahila Kosh (RMK) and the programme, Mahila e-haat to encourage entrepreneurship among women. A positive association was found among the number of establishments under women entrepreneurship and per cent of beneficiary under RMK across states of India. Moreover, the existing policies should help in promoting social attitudes conducive to women's entrepreneurship. There is also a need to strengthen social protection and promote social inclusion, including supportive family policies, such as maternity

and paternity leave, flexible work schedules and availability of child care services etc. for mainstreaming economic development of women in the country.

Note: The opinions expressed in the article are strictly personal and does not reflect the views of the organization where she is currently working, i.e. Ministry of Women and Child Development or Government of India.

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## Enhancing Energy-based Livelihoods for Women Micro-entrepreneurs: A Case Study\*

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### Abstract

*The State of Madhya Pradesh has been providing 24 hours supply of electricity, since 2014. This transformation has touched many lives and businesses. It has contributed to agricultural growth of more than 20% in last 5 years. The electricity sector reforms have had a significant effect in boosting the local economy and improving quality of life. The rural electricity consumption has more than doubled in last 3 years. The rural income levels too have improved, which can be seen from the fact that loans to farmers by Co-op banks too have more than doubled.*

*Top developmental priorities for the state include empowerment of women and creation of entrepreneurs. The government's flagship schemes such as "Mukhyamantri Kaushalya Yojna", "Mukhyamantri Swarojgay Yojna" and "Mukhyamantri Yuva Udyami Yojna" are geared to provide capacity building of prospective entrepreneurs.*

*This report on "Enhancing Energy-Based Livelihoods for Women Micro Entrepreneurs" is a microcosm of these priorities. The case study showcases how women can be empowered by supporting energy-based enterprises and business development. The report reaffirms the faith that a reliable 24-hour electricity creates business opportunities, which in turn can promote women-led microenterprises.*

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### INTRODUCTION

The energy sector is a non traditional area for women not only because of the stereotypical view of energy technological development as men's domain but also because of the sector's general lack of recognition of the distinct energy needs of women. This has resulted in the predominance of men in the sector and women's lack of access to energy resources for their specific needs. This problem has, however, entered the radar of concerns of the global movement for social development and gender equality as demonstrated by the inclusion in the United

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Nations 17 Sustainable Development Goals (SDGs) for 2016-2030, the goal of *ensuring access to affordable, reliable, sustainable and modern energy for all* as the seventh SDG. Moreover, unlike in the previous United Nations Millennium Development Goals (2000-2015), reporting on the progress of SDGs includes (as part of the report on SDG 7) not only the proportion of the world population with access to electricity but also the proportion with access to clean fuels and technologies for cooking.<sup>1</sup>

Even prior to the adoption of the 17 SDGs as the agreed framework for international development, body of knowledge and effective practices in facilitating women's claiming of space in the supply and demand chains of energy development have started to emerge. The overall goals are to reposition the energy sector as an arena providing equal participation opportunities for both women and men, and to redesign energy technological development and distribution to equitably respond to the distinct needs and interests of women and men.

To contribute to this body of knowledge and effective practices, the South Asia Department of the Asian Development Bank (ADB) has documented related exemplary programs and projects of its developing member countries. Among them is an ADB-financed technical assistance (TA) project of the Government of Madhya Pradesh in India, *Enhancing Energy-Based Livelihoods for Women Micro-Entrepreneurs*.<sup>2</sup> This case study report presents this TA project and its contributions to the optimization of available power supply for women's empowerment and gender equality results in Project-covered areas.

### **Aims and Expected Outcomes**

From July 2011 to June 2017, ADB supported the implementation of the TA project, which supplemented an ADB-financed program of the Government of Madhya Pradesh, the Madhya Pradesh Energy Efficiency Improvement Investment Program (Project 1). The program was approved in July 2011 and implemented in October 2011, with expected completion in February 2018.

The program aimed at enabling three electricity distribution companies (DISCOMs) to supply quality 24-hour power supply to rural households in the state of Madhya Pradesh. It was expected to bring better development opportunities in education, business, industry, and entertainment; and upgrade the overall quality of life of the rural population of Madhya Pradesh. It had four main components: (i) separate power supply to farmers and households through feeder separation, (ii) install high voltage distribution system, (iii) supply quality improvement and metering, and (iv) upstream 33-kilovolt network strengthening. The executing agencies for the program were the three electricity DISCOMs: (i) Madhya Pradesh Madhya *Kshetra*

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<sup>1</sup> United Nations Economic and Social Council. 2017. *Progress towards the Sustainable Development Goals: Report of the Secretary-General*. <https://unstats.un.org/sdgs/files/report/2017/secretary-general-sdg-report-2017-EN.pdf>.

<sup>2</sup> ADB. 2011. *Technical Assistance to India for Enhancing Energy-Based Livelihoods for Women Micro-Entrepreneurs*. Manila (TA 7831-IND).

*Vidyut Vitaran Company Limited* (central zone distribution company), (ii) *Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited* (eastern zone distribution company), and (iii) *Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited* (western zone distribution company). The executing agency for the technical assistance project was the Energy Department of Madhya Pradesh.

To optimize the impacts of the program for women beneficiaries, the Government of Madhya Pradesh and ADB agreed to attach the project, which specifically targeted self-help groups (SHGs) of women in program covered areas. Hand in Hand India in joint venture with the Frankfurt School of Finance and Management implemented the project in 2013-2015 with guidance from DISCOMs.

The expected gender equality and women's empowerment results of the program and project were the following:

- increase access of women to modern energy services and the accompanying economic opportunities, which would result in (i) decreased time spent on household chores; (ii) reduced drudgery; (iii) increased income-generating activities, (iv) increased sense of safety and personal empowerment, and (v) improve quality of life; and
- development of the energy sector with strengthened and expanded women-managed energy enterprises as well as improved capacity of women to produce and supply energy products and services.

### **Gender equality issues in energy development**

Madhya Pradesh has taken many steps in the past for women empowerment. Many women empowerment schemes launched by Madhya Pradesh were emulated by other states. Madhya Pradesh is keen on improving its human development index. Its literacy rate is also improving. Looking at the keenness of Government of Madhya Pradesh to take up women empowerment as an agenda, a project to enhance energy-based livelihoods for women entrepreneurs was proposed.

Low access of women to key resources such as energy and land can adversely impact the other measures taken to ensure gender equality.

Furthermore, the following gender issues underscore the importance of specifically targeting women in the optimization of the benefits of improved power supply:

#### **a. Social and Political Norms and Practices Affecting Women's Access to Energy**

Women's participation in decision-making and ability to seize development opportunities are often restricted by traditional gender norms. Household chores and reproductive roles provide them little space to take part in activities outside their homes, including training in the management of energy projects and in energy-related livelihood skills. Because of these, women benefit less from networking opportunities for energy-related

enterprises. They also often lack voice to make their energy needs and priorities heard. For instance, they do not have control over the types of fuels to use and types of equipment to purchase. In most cases, they are not involved in planning house ventilation and lighting.

Institutions working in energy sector projects often lack both the understanding of gender issues and capacity to take affirmative actions. Allocating resources and building institutional awareness to promote gender equality remain a challenge.

**b. Limited Economic Opportunities**

Gender inequality in access to productive assets, labor saving technology, and affordable credit impedes the development of micro- and small enterprises, where women predominate. Women are often offered lower wages for work. The perception that women are secondary earners continues to be used as a justification for their lower wage rates.

**c. Lack or Inadequate Access to Energy Resources**

About 87.2% of rural households in India (95.8% households in Madhya Pradesh) use conventional fuel such as firewood, crop residue, cow dung, and coal and/or charcoal for cooking; while only 11.5% in India (3.9% in Madhya Pradesh) use liquefied petroleum gas, piped natural gas, or biogas. About 43% of India's rural households still use kerosene as a major source of lighting.<sup>3</sup> These traditional fuels are inefficient, often unreliable, and pose health risks; and their collection falls disproportionately on women and girls.

In addition gender issues in energy use patterns are not recognized in energy access policies and energy investments. Policies and programs on energy access generally do not provide sufficient consideration of women's needs and priorities. In general, engineers and other technical persons in energy projects often consider the energy sector as "gender neutral" and, in the process, overlook the fact that energy impacts men and women differently.

**d. Lack or Limited Access to Energy-Related Services**

Household basic services, such as water supply, sanitation, and electricity, are lacking. This increases women's drudgery and consumes most of women's time and energy with no or very little time for rest, recreation, skills enhancement, and income-generating activities.

In general, women have limited access to information, and hence may not be able to gain an equitable share of new opportunities.

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<sup>3</sup>Government of India, Office of the Registrar General and Census Commissioner, India. 2011. *Census of India*. Houses, Household Amenities and Assets Data 2001-11. Delhi. [http://censusindia.gov.in/2011census/hlo/Data\\_sheet/India/Source\\_Lighting.pdf](http://censusindia.gov.in/2011census/hlo/Data_sheet/India/Source_Lighting.pdf) (accessed 8 June 2017)

Inadequate public transport facilities restrict the mobility of women outside their community and create a perception of lack of safety and security.

## Approaches to address gender equality issues

Key interventions that helped address gender issues and meet project goals were the following:

### I. Mainstreaming Gender in Program and Project Design and Approaches

- **Gender action plan:** An inclusive gender action plan was prepared based on the gender analysis undertaken during the project preparatory technical assistance. It focused on building user awareness on safe and efficient use of electricity, building capacities of women micro-entrepreneurs and women SHGs, and developing micro-enterprises headed by women.
- **Gender action plan as loan covenant:** The loan agreement included the implementation of the gender action plan with adequate allocation of resources not only for its implementation, but also for monitoring and reporting key gender outputs and outcomes. The loan agreement states:

*The Borrower, the State and the DISCOMs shall comply with and implement the Gender Action Plan in accordance with its terms, allocate adequate resources for such implementation, and shall monitor and report to ADB on key gender outcome and output targets in accordance with the project performance and monitoring system developed for the Project, including, without limitation, (i) improving energy-based business opportunities for women-headed micro-enterprises; (ii) capacity development of women self-help groups to deliver micro-enterprise development services; and (iii) gender-sensitive user awareness programs and energy conservation.*

- **Evidence-based gender assessment:** A needs assessment survey was undertaken to identify the needs of and constraints faced by women micro-entrepreneurs in expanding or starting up microenterprises. This helped in preparing a customized project strategy.
- **Convergence with existing poverty reduction and social and gender inclusion scheme and program:** The project liaised with existing poverty alleviation scheme and programs of the state and central government—the District Poverty Initiatives Project, now implemented with the National Rural Livelihoods Mission.<sup>4</sup> A joint action plan was formulated with District Poverty Initiatives Project to facilitate better coverage under the project and to supplement government efforts toward poverty reduction and social and gender inclusion in rural areas.

- **Engaging technology providers in empowering women entrepreneurs:** Women entrepreneurs were oriented and educated about the available resources in their area so that they could utilize the available opportunities to expand their enterprises. The project introduced women to technology providers such as the Central Institute of Agricultural Engineering.
- **Partnership with nongovernment organizations:** Hand in Hand, India in joint venture with the Frankfurt School of Finance and Management were engaged to organize, mobilize, and build capacities of women entrepreneurs and SHGs.
- **Mobilization of women self-help groups:** The women trainees were selected from the existing pool of SHGs in the project districts to complement the existing women groups and strengthen their capacities. The SHGs served as a channel for introducing project inputs and interventions to community women. Selection of women SHGs was based on specific criteria such as regularity of meetings, practice of savings, proper record keeping, and compliance with identity requirements in accordance with the “Know Your Customer” form.
- **Comprehensive training design and strategy:** An inclusive training design and strategy was developed. Training modules and instructional materials were prepared (based on the findings of the needs assessment survey) to ensure the relevance and cultural appropriateness of the capacity building program. These trainings enabled women to enhance their understanding of energy conservation, financial literacy, and enterprise development.
- **Inclusion of gender indicators in project monitoring system:** The project performance monitoring system, which included gender equality and social inclusion results, was developed.

## II. Key Activities during Project Implementation

- **Needs assessment survey:** A needs assessment survey was undertaken to identify and understand business needs, constraints, and opportunities

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<sup>4</sup> The DPIIP is a poverty alleviation project of the Panchayat and Rural Development Department of the Government of Madhya Pradesh. It focuses on economic and social development of the groups from low-income households with similar needs, economic statuses, and social background. It aims to improve the capacity and opportunities for the targeted low-income rural households to achieve sustainable livelihoods.

The *Swarnjayanti Gram Swarozgar Yojana*, a flagship program of the Ministry of Rural Development implemented in 1999, has been restructured as National Rural Livelihoods Mission since fiscal year 2010-2011. It aims to provide sustainable income to rural below poverty line households through income-generating assets and economic activities. It also aims to reach out to all the rural poor families (below poverty line families) and link them to sustainable livelihood opportunities. It intends to nurture them till they come out of poverty and enjoy a decent quality of life.

for women. Respondents for the survey were selected from eight sample districts in consultation with the DISCOMs. An assessment of women SHG members was also undertaken during the Integrated Enterprise Module (IEM) training to assess their suitability as providers of Business Development Services (BDS) to women, as trainers for gender and energy issues (specifically on the safe and effective use of electricity), and for BDS.

- **Capacity development of women entrepreneurs belonging to self-help groups:** The Enterprise Development Program and BDS were made available to women entrepreneurs of SHGs in project-covered areas. The Enterprise Development Program was a composite program consisting of four training modules (Table below).

|                                     |   |
|-------------------------------------|---|
| Integrated Enterprise Module        | Focuses on gender sensitivity, safe and efficient use of electricity to reduce women's drudgery, energy conservation, and development opportunities from improved power supply  |
| Gender Energy                       | After the IEM training, project mobilizers-cum-trainers selected women—who were willing to become resource persons, and trained them as trainers in business development services. This gender and energy training harnessed the participants' skills in leadership, effective communication, and gender analysis of energy management.   |
| Skill development, pottery training | Focus on energy-based livelihood (e.g., tailoring, pottery, training bangle making, <i>dona pattal</i> [disposable plates made of dried leaves with plastic lining], paper cup making, assembly of bulbs, and others). This was provided to participants of the IEM training who demonstrated entrepreneurial capabilities and interest in skills training.   |
| Business Development Services       | This is a training on access to credit and other financial services, financial literacy, selection of energy-based services enterprise, product and design development, packaging, marketing strategies, market linkages, business management, and other services that women entrepreneurs requested to start their enterprises. This was provided to participants of the skills development training who applied their learned skills and demonstrated leadership qualities and business acumen. |

Source: ADB. 2015. *Completion Report: Hand in Hand India*. Manila.

- **Monitoring and reporting:** The project mobilizers-cum-trainers (MCTs) reported the progress of project activities monthly. Data on women's business support needs were collected through a BDS form. Actions on women enterprises were recorded in the SHG logbooks. The gender equality and social inclusion results were included in the project performance monitoring system. The specific indicators included were the number of women adopting energy-based improvements or starting energy-based enterprises, number of women entrepreneurs having access to business services through SHG assistance, and number of motivation and skills training given to women.

### **Project achievements**

Under the project, a total of 20,729 women members of 2,803 SHGs in program covered areas attended the IEM training, 506 of whom attended the gender and energy training and were trained as BDS providers and trainers, and 1,650 of whom attended the skills development training; 517 of the 1,650 were trained in BDS; and 63 women entrepreneurs accessed BDS through SHG assistance.

#### **A. Economic Impacts**

According to the project reports, field observations, and informal interviews with women, the salient contribution of the project were:

- raise women's awareness of energy-based technologies;
- improve their business skills;
- inform them about BDS and income-earning opportunities from improved power supply; and
- made them better equipped to operate electric machines (e.g., motorized wheels for pottery, motorized sewing machine for garment stitching, paper molding machines for disposable utensils, grinders and deep freezers, etc.) which improved productivity and efficiency of their enterprises.

More than two-thirds of the trained women started to practice energy-saving measures (such as switching off lights when not in use, buying ISI<sup>5</sup> and star-rated<sup>6</sup> electric equipment, fixing wires properly, and using energy efficient bulbs instead of incandescent bulbs). The project enabled 590 women to upgrade their existing businesses using energy-based technologies or start new nonconventional trades

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<sup>5</sup> ISI mark is a certification mark for industrial products in India. The mark certifies that a product conforms to the Indian Standard, mentioned as IS:xxxx on top of the mark, developed by the Bureau of Indian Standards, the national standards body of India.

<sup>6</sup> The Bureau of Energy Efficiency under Ministry of Power of the Government of India developed minimum Energy Performance Standards and Labeling for equipment and appliances and buildings to standardize the energy efficiency ratings and to indicate energy consumption under standard test conditions. It grades equipment and buildings on their energy efficiency, from one star for the least energy efficient to five stars for the most energy efficient.



such as bulb assembling, bangle making, disposable utensils making (cup, plate, and bowl), *atta chakki* (flour mill), grain and pulses grinding, refrigeration services, etc.

### Social Impacts

The project reports and field observations showed that the 24-hour power supply had the following impact on women's lives:

- Reduced women's drudgery and provided them with time for rest and recreation;
- Increased mobility of women, study time of children (especially girls who used to have less time for studies because of household chores);
- Improved women's skills in negotiation and management, and public speaking;
- Women played a key role in decision-making in their family;
- New energy-based businesses helped women contribute to their household income;
- Challenged patriarchal norms and led to adoption of empowering practices among women such as removal of veils;
- Facilitated appreciation and support for women entrepreneurs by the villagers;
- Husbands became more supportive and willing to share household work.

### BREAKING GENDER BARRIERS: VOICES OF EMPOWERMENT

*Sheela Bai Verma, an agricultural labourer  
Amilya Haat Village, Raigarh District*

I learned to use an electrically powered bangle making machine. I felt confident and wanted to purchase it. The project connected me to the DPIP officer, who helped get me a financial assistance to purchase the machine under the DPIP scheme. My work became very smooth and fast, and my income increased significantly. I have cash in hand which I spend on my own terms. The project also exposed and linked me to the market. I go to the city to purchase the raw materials and negotiate good prices for wholesale purchases for other women in the trade. I sell the bangles in the market; people also approach me during fairs, festivals, college events to put up a stall. I put a stall at the Block Development Office premises where I was provided space free of cost. It's a new experience and I am enjoying it.

DPIP: District Poverty Initiatives Project

***Suman Prajapati, Nowgaon Village, District Chhattarpur, Madhya Pradesh***

Traditionally, men brought clay from outside the village, made pots, and sold the finished products, while women performed the role of powdering, filtering, and processing the mud. Women were not allowed to use the manually operated wheel due to cultural restriction.

Suman Prajapati challenged this social norm in her village. Currently she is the head of a microenterprise. She is financially independent and supports her family expenses. With the skills development training provided by the project, she started to venture into multiple income-generating activities to augment her family income.

She became a potter using a motorized pottery wheel, worked as a midday meal cook in the village school and as a book keeper in SHGs under the DPIIP program. She underwent training on business development services. Her mobility has increased. She now travels to other districts as a pottery trainer.

Operating the motorized wheel reduced her drudgery, time spent at work, and increased productivity. Her status has improved in the household and community. Her family supported her decision to stop observing the traditional practice veiling. She now feels equal to her husband. Suman supported and mentored about 35 women who wanted to start the same enterprise and helped them in procuring the motorized wheel. She has become a role model in her community

***Mala and her group gain community recognition***

Mala Dehayriya, a self-help group (SHG) member in Panchayat Rohankala, Chhindwara District, started to be recognized by her community when she became a bulb assembler. She even became more known than her husband in the community. People started to call her husband, “husband of Mala who repairs bulbs.” Within a short period of setting up her new enterprise, she started receiving more requests for bulb repair work which is cheaper than purchasing new bulbs. To expand the business, she involved other interested SHG women and approached local offices, hotels, and tent and light houses to take bulb repair work services on contract basis. This enhanced her income and provided income-generating opportunities to other SHG women.

***Life from Paucity to Sufficiency: Experience of a Leather Bag Maker***

Sugan Bai of Nagda Village, Dewas District was a daily wage laborer who worked in farms and sometimes in a nearby leather factory to make ends meet. While working in a factory she learned how to make leather bags. She was motivated to join a women self-help group. She started saving money, purchased a hand stitching machine and started making cloth and leather bags at home.

She received the integrated enterprise module training under the Project and was encouraged to use motorized machine. She realized its merits and soon, with improved productivity and income, purchased another motorized machine. She thus expanded her leather bag making enterprise, and now her husband is assisting her. She shared that the electric machine has helped her to complete the orders on time. As a registered artisan, she has an identity card that enables her to participate and avail of a sales counter or stall in the trade fairs organized by the government at the district, state, and central levels.

***Babita Sisodia, Business Development Service Provider  
Betma Village, Indore***

Babita was a part-time tailor and used to make clothes through manual sewing machine. She attended the integrated enterprise module and skills development training in 2014, and was guided on linking with the market. She purchased a motor to mechanize her sewing machine. She said her work became physically less stressful. Her productivity increased significantly. Enhanced sales and income encouraged her to purchase two motorized sewing machines. Recognizing her hard work and willingness to train other community women, she received training as a business development services provider and trainer. She trained 26 women. Now her husband assists her by bringing contract work from garment factories, which she further sublets on contract basis to other community women.

The other crucial benefits of the project were -

- Partnerships between the government and NGOs were established and considered crucial in sustaining the gender mainstreaming initiatives. These linkages helped to improve women's access to information, develop their skills, and enhance their livelihood and income.
- The project contributed towards increased understanding of gender equality and helped in drawing their attention to household energy needs, energy use patterns, and women's contributions to energy efficiency as consumers and entrepreneurs.
- The project successfully connected three areas: energy, gender, and finance and/or entrepreneurship. The project served as a good example of how gender can be mainstreamed in an energy project in a rural area and how gender mainstreaming can contribute to rural poverty reduction and ensure gender equality.

**Achievement of gender equality results: salient project features**

**Adequate allocation of human resources in project area:** The project's human resources were positioned optimally to cover the vast project area.

**Adequate time and resources for meaningful consultations and mobilization:** The project staff ensured that participation targets were met and women actively participated in all project activities including in needs assessment.

**Customized, participatory, and interactive training modules:** The training effectively enhanced women's understanding of energy conservation, efficient and effective use of energy, financial literacy, enterprise development using electricity, and gender concerns linked to the use of energy in the households and businesses activities.

**Women self-help groups as project entry point:** The project built on existing social organizations, specifically the SHGs, for introducing the project and providing support to women.

**Partnerships between the government and nongovernment organizations:** Both the government and NGOs played key roles in achieving and sustaining the gender equality results.

**Training of the project management team in gender mainstreaming:** Senior project team members attended gender mainstreaming training organized by ADB. These sessions provided opportunities to present the gender equality and women's empowerment achievements of the project as well as to learn from other similar initiatives.

**Commitment of the executing agencies in the implementation of the gender action plan:** The gender sensitivity of the senior officials of the DISCOMs was instrumental towards achieving gender equality results. They attended the project specific trainings and visited project beneficiaries.

## **Conclusion**

Energy is key to alleviation of poverty and achievement of sustainable development goals. The project clearly demonstrated that energy sector holds immense potential for employment and entrepreneurial opportunities for both men and women. It is therefore needed to reposition the energy sector in India and equitably respond to the needs and interests of men and women. The project highlighted how gender-responsive approach to rural electrification in our country can address the gender equality issues in the energy sector and contribute towards empowerment of women.

The innovative initiative by Madhya Pradesh has shown that increased access of women to quality energy resources and services (if combined with gender awareness and capacity development in safe and efficient use of electricity and in energy-based enterprises), can increase the income of women entrepreneurs. Further, it can increase the propensity of women to save, decrease time spent by women on household chores, reduce women's time poverty and drudgery (with men's willingness to share household chores), increase women's participation in decision-

making in the household, and reduce the incidence of illnesses. The project is an exemplar that with appropriate enabling conditions and support (including access to finance, markets, and technologies), women can make significant contributions to the energy sector and use energy as an instrument for enhancing their livelihoods, and can demonstrate their capacity as producers and suppliers of energy products and as service providers.

Thus, if India has to successfully respond to the sustainable goals of poverty reduction, gender equality and reducing inequalities, the case study of Madhya Pradesh should be replicated across the country.

T. Janakiram\*, Ritu Jain\*\*, A.K.Vyas\*\*\* and R.Srilekha\*\*\*\*

## Floriculture Entrepreneurship in India: New Avenue of Economic Empowerment of Women

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### Abstract

*Floriculture as an activity has immense potential for generating gainful self-employment among farmers. In recent years it has emerged as a profitable agri-business opportunity both nationally and internationally. Floriculture has improved the social and economic standards of living of people. Further the growing consciousness among citizens to live in an environment friendly atmosphere has led to an increase in the demand of floriculture products in developed and developing countries. This paper discusses floriculture industry in India - its growth, dynamics, challenges and also looks into emulating proven practices from China. Further, the paper addresses the potential of floriculture as an agribusiness opportunity and its potential for economic empowerment of women.*

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### INTRODUCTION

Since the last decade, there has been a rise in the export of cut flowers, globally. It has been well documented that commercial floriculture has higher potential per unit area than most of the field crops and hence has emerged as a lucrative form of business. The marketable surplus for domestic sale, available after the export of flowers has found its way into the local market influencing people in cities to purchase and use flowers in their daily lives. Floriculture thus offers great opportunities to farmers as viable means of income leading to their economic empowerment.

Floral farming offers a wide range of job opportunities such as: farm manager, plantation expert, supervisor or project coordinator, floral designers, landscape designers, landscape architects and horticultural therapists.

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## Floriculture: Scenario in India

While rest of the world adopted modern floriculture practices, in India, flower cultivation remained traditional for a long time confined primarily to homestead farming. Globalization of Indian economy and the liberalization of the seed policy during 1990s paved way for the advent of modern commercial floriculture. The economic liberalizations along with reforms in seed policy led to the establishment of a large number of Export Oriented Units (EOUs) fully managed by the corporate sector. Today, floriculture industry in India is characterized by traditional flowers, cut flowers, bedding plants, plug plants, fillers, trees, grasses, foliage and flowering potted plants. In addition, the industry also produces dry flowers, annual flower seed and planting material, value added products like essential oils and nutraceutical pigments.

India is a leading producer and exporter of dry flowers in the world.<sup>1</sup> The major production centers are in Tuticorin, Cochi and Kolkata. India has a sizeable nursery industry with major hubs located in Kadiyam (Andhra Pradesh), Kalimpong (West Bengal), Pune (Maharashtra), Gajrola and Shaharanpur (Uttar Pradesh) and Bengaluru (Karnataka).

Floricultural exports<sup>2</sup> from India stand at Rs.455 crores and comprises of fresh cut flowers (to Europe, Japan, Australia, Middle East and USA) loose flowers (for expatriate Indians in the Gulf), cut foliage (to Europe), dry flowers (to USA, Europe, Japan, Australia, Far East and Russia) and potted plants (to Middle East) besides seeds and planting material. India's position as an exporting country for cut flowers stands at 29 among the flower exporting countries with a value of 8,227(000USD) which translates to a percentage share of 0.31% globally. On the other hand, India imports flowers like *proteas*, *orchids*, *Iris*, *calla lily*, *heliconia* worth Rs. 38.25 crores from Thailand, Netherlands and People's Republic of China.

The total area under floriculture in India is second largest in the world and only next to China. The traditional flower sector registered an impressive growth during the period from 2001-2014<sup>3</sup> with significant increase in area from 71000 ha to 255000 ha producing 366,000 MT and 2297000 MT respectively. The major production comes from Karnataka, Tamil Nadu, Andhra Pradesh, Uttar Pradesh, Rajasthan,

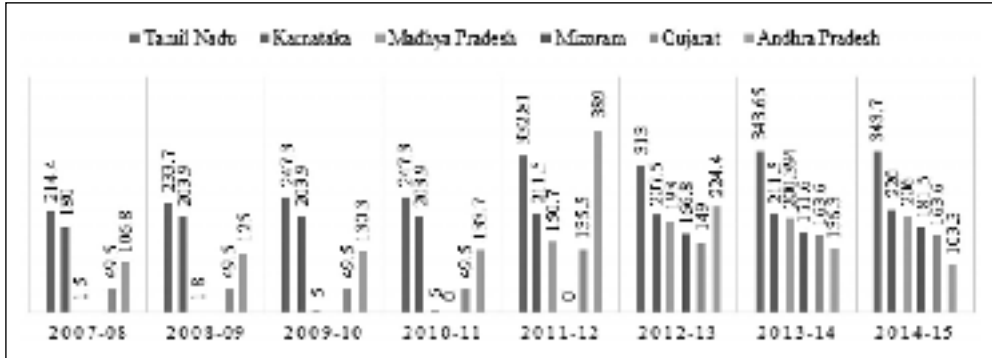
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<sup>1</sup> In India, nearly 98.5% of flowers are grown under open cultivation and only 1.5% flowers are grown under greenhouse cultivation.

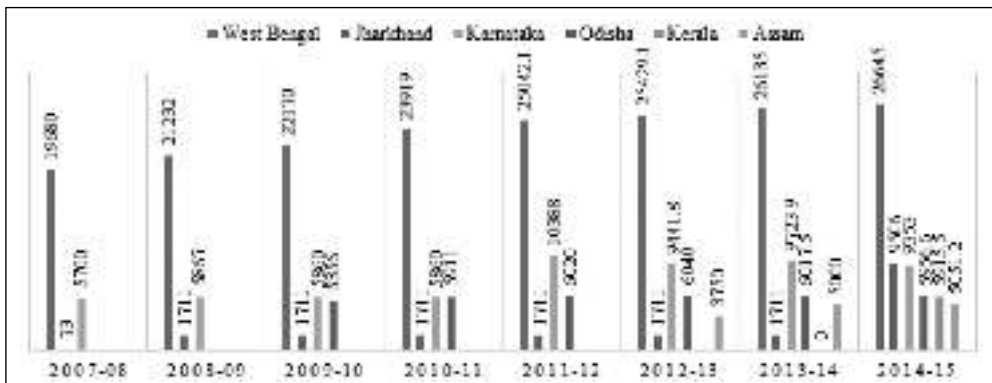
<sup>2</sup> The product mix comprises of forest produce, farm residue, seeds, pods and fruits besides specific flowers that are dried.

<sup>3</sup> The cut flower production was 543000 MT at the end of 2014. West Bengal, Karnataka, Uttar Pradesh, Maharashtra, Gujarat, Himachal Pradesh, Uttaranchal are the major producers of cut flowers. In the domestic markets, dedicated marketing infrastructure for cut flowers is in place in Bangalore which has a flower auction center.

West Bengal, Bihar, Jharkhand, Kerala and Telangana while the major markets are in Chennai, Bengaluru, Kolkata, Hyderabad, Kadiyam, Pune, Mumbai and Delhi (*Figure 1 and Figure 2*).



**Figure 1: Major loose flower producing states ('000 MT)-2007-08 to 2014-15<sup>4</sup>**



**Figure 2: Major loose flower producing states (Lakh No.s) -2007-08 to 2014-15<sup>5</sup>**

### Floriculture industry and engagement of women in India

In rural India, 84% women are dependent on the agricultural sector for employment. While on one hand agriculture has provided a steady source of income to many women, on the other, women get less daily wages compared to male. Moreover, women farmers do not have access to the decision making process and this leads to their lack of opportunities, inaccessibility to training programs and lack of awareness about modern technologies. Engagement of women in the floral industry has proved to a boon for them as it has provided them with additional sources of income. Besides cereal, pulses, fruits and vegetables there is an enormous scope

<sup>4</sup> <https://data.gov.in/catalog/state-wise-area-and-production-flowers>

<sup>5</sup> <https://data.gov.in/catalog/state-wise-area-and-production-flowers>



of value addition in flower crops. Value addition includes preparation of products from fresh flowers like cut flower arrangements, bouquets, garlands, wreaths, buttonholes, floral jewelry; petal embedded handmade paper, dried flower arrangements; products made up of press dried flowers like greeting cards, wall hangings, sceneries, table tops, book marks, and paper weights. The flower industry also offers opportunity of making processed flowers products like jam, jelly, beverages, rose water, gulkand, gulroban, floral dyes, and floral tea (rose, chrysanthemum, jasmine, hibiscus). In addition, a number of products like essential oil, perfume, insect repellants, cosmetics, pigments like xanthophylls, carotenoids, luteins, anthocyanins, etc. which have nutraceutical properties and pharmaceutical compounds can be prepared from the flowers.

### **Flower Power: Initiatives to Empower Women in Floriculture Business**

As has been discussed, the Indian floriculture industry holds immense potential for economic empowerment of women and has been playing a crucial role in providing employment to women since the last decade. The Agricultural and Processed Food Products Export Development Authority (APEDA) in collaboration with Department of Food Processing Industries, Government of West Bengal and Horticultural Science Division, ICAR, New Delhi, in recent times, organized an event for the promotion of dry flower industry in Kolkata. The workshop was well attended by various stakeholders ranging from eminent scientists, corporate representatives, farmers, local artisans and women entrepreneurs. The predominant objective of the workshop was to impart knowledge on dry flower quality management, address upcoming challenges of the floriculture industry and discuss ways to effectively deal with the challenges.

The next segment illustrates the significant contribution of key agricultural research institutes which have changed the lives of women by opening up avenues of employment for them in the floriculture industry.

**Indian Agricultural Research Institute :** The division of floriculture and landscaping of Indian Agricultural Research Institute undertook research on dry flower making and established an exclusive laboratory on value addition in the institute. Efforts were made by the scientists to transfer this technology to farmers (men and women) by exhibiting dry flower products at various forum like exhibitions, flower shows, farmer fairs, science fairs, global conferences, and trade fair. Indian Agricultural Research Institute also adopted three villages in Haryana and transferred the technology to women of these villages. Different entrepreneurship programmes and model training courses were conducted to equip women with skills needed for floriculture business. For instance, women slum dwellers in Gazipur Area of Delhi were taught the technique for making drying flowers<sup>6</sup> and for making products

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<sup>6</sup> The technology of drying flowers was commercialized with M/S Floral Images

from dry flower. The objective was to improve their livelihood and make them self-reliant.

**Navsari Agricultural University, Gujarat:** In 2017 the institute organized a national seminar cum exhibition on *Awareness and Promotion of Dry Flower Exports and Industry in Gujarat* in collaboration with Agricultural and Processed Food Products Export Development Authority (APEDA). The focus of the seminar was to create a common platform for florists, scientists, professionals in floriculture industry, policy makers to discuss ways in which dry flower-based industries can be expanded in the state of Gujarat. The seminar also focused on raising awareness, in particular among women, about the potential of floral industry and possibilities of income generation. The endeavour of the institute is to escalate export potential of dry flowers in the country by encouraging entrepreneurship in floriculture business and by setting up new dry flower-based industries in Gujarat.

**Dr YS Parmar University, Nauni, Solan, Himachal Pradesh:** The department of floriculture and landscape Architecture has standardized technology for dehydration and value-addition of a large number of cultivated crops, native flora. It has also set up a laboratory for demonstration of technology and the value-added products. The department is acting as an incubation centre for students and farmers including women. Many NGOs, and women SHGs have shown interest in adopting the technology.<sup>7</sup>

### **TNAU, Coimbatore-Women Entrepreneurship Training on Flowers**

With the objective of promoting entrepreneurship and self-employment to women, the Tamil Nadu Agricultural University (TNAU), Coimbatore is playing a key role in promoting entrepreneurship and self-employment of women. Recently they organised training program for women to sensitise them about value added products which can be produced from fresh and dry flowers. The purpose of the training program was to make women aware about the potential of the floriculture business and create more women entrepreneurs in the segment. The training program was conducted in the department of floriculture and landscaping, Coimbatore and imparted knowledge on technical skills and managerial skills such as financial management, marketing of products, preparation of project reports, networking with clients and dealers.<sup>8</sup>

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<sup>7</sup> A small cottage industry/ entrepreneurship can be started in the field of dried flowers with the minimum amount of rupees 10,000/ only. The dried flower products fetch good returns in the market and a single person can earn from rupees 200 to 1000/ day

<sup>8</sup> The duration of training program was 25 days and was supported by the Department of Marginal, Small and Medium Enterprises, Govt. of Tamil Nadu, Chennai

## Women Floriculturists: Success stories from across India

### Orchids: Upper Namcheybong, Pakyong, East Sikkim

Orchids have acquired a special place in Indian floriculture markets and there has been a steady increase in their demand every year -. There are several reasons for the popularity of orchids in the floricultural markets. Orchids fetch the highest per unit price, give higher return to the growers compared with other floriculture crops and hence undoubtedly it is one of the favourite flowers of the farmers. Anuradha Chhetri, an entrepreneur, residing in Upper Namcheybong in East Sikkim was selected as a beneficiary of a DBT sponsored project on 'DBT's Mission for Quality Planting Material production and Utilization in North East'. Prior to commencing work Anuradha attended motivational workshop organised by ICAR-NRC for Orchids in Sikkim.

Anuradha Chhetri owns two polyhouses (500 sq. m.) in which she grows 2000 Cymbidium orchid plants of six varieties. Annually one thousand two hundred plants bloom to produce 3600 to 4000 cut cymbidiums. By selling these cut flowers she earns approximately Rs. 1,80,000 to 2,00,000 every year. She also sells Cymbidiums as pot plants which fetches her around Rs. 500 - 1000 per plant. She learnt propagation techniques of producing plantlets through back bulbs and tissue culture from ICAR-NRCO. She earns Rs. 2,00,000 - to 2, 50,000 from her orchid farm out of which she spends approximately Rs. 80,000 - 1, 00,000 annually. Her net annual income is to the tune of Rs. 1,20,000 to 1,50,000 (*Table 1*).

**Table 1: Economics of Orchid cultivation in polyhouses  
(2 Nos. 500 sq.m each) - Sikkim**

|   |                                |
|---|--------------------------------|
| Gross annual income from Orchid cultivation | Rs. 2 lakhs to Rs. 2.5 lakhs   |
| Cost of Production                          | Rs. 0.80 lakhs to Rs. 1 lakh   |
| Net Annual Income                           | Rs. 1.2 lakhs to Rs. 1.5 lakhs |

### Journey from corporate to floriculture industry: Story from Delhi

Poonam Qamra worked as an executive for nearly 15 years in a multinational company. She has already been interested in value added products from flowers has been a member of All India Kitchen Garden Association for over a decade. This association primarily focuses on home gardening, waste management, multiplication of plant material, interior-scaping and various other activities. Mainly focusing on activities of and organizing and participating in Udyaanmela. During her visit to IARI, *krishimela*, she became interested in value-added products from dry flowers. To gain more knowledge about dry flowers and its value-added products she visited the Division of Floriculture and Landscaping, Indian Agricultural Research Institute, New Delhi. Poonam underwent training in the institute. Thereafter, she signed MOU with the institution and began her own company. Her company specializes in

making floral images from dry flowers and engages rural women to develop various products. She earns Rs. 25,000- 30,000 per month.

### **From backyard garden to a multi-crore floriculture company: Story from Kashmir**

Nusrat Jahan Ara lives in Dadoora village in Kashmir's Pulwama district. In 2010, the computer graduate quit her government job to start her own small enterprise. She started growing flowers in the backyard of her ancestral home and selling them. Gradually she noticed rise in demand of flowers grown in Kashmir. Nusrat realized the potential in the floriculture sector in the valley.

She started working with vendors a credit basis, took bank loans and set up a her own enterprise. Today, she is a successful entrepreneur and has also contributed towards rejuvenation of the floriculture industry in the valley. Nusrat owns three flower farms and a retail outlet. Her company, Petals and Ferns, currently employs 20 people and has an annual turnover of Rs 2 crore.

### **Women floriculturists of Kotha Reddypalem and Patha Reddypalem villages, Machilipatnam**

Women flower sellers from two villages turned into successful women entrepreneurs-cum-farmers by engaging in floriculture. 420 women from Kotha Reddypalem and Patha Reddypalem villages in Machilipatnam mandal, Andhra Pradesh grow different kinds of flowers in their backyards. These women used flower grown in their backyard as a source to earn income. They were engaged with the entire process of production which ranges from growing flower-bearing plants to marketing the flowers. The women entrepreneurs on an average earn Rs. 6000-7000 per month, irrespective of the season. The success from floriculture business has motivated women of the villages to adopt new marketing strategies which will give further fillip to their business.

### **Association with the Leading Country, China**

As discussed, China is the leading country in floriculture production. The country has more than 775,500 hectares devoted to floriculture production, with more than half of the area being occupied by landscape trees. Except for the northern region and part of the western region, floriculture is being practiced all over the country. Whereas Yunnan and Guangdong provinces are the major zones for the production of cut flowers and cut foliage, Zhejiang, Jiangsu and Hainan are the zones for seedlings and landscape trees. Ornamental potted plant production is mainly centred in Guangdong, Fujian and Hainan provinces, and seeds and bulb production is concentrated in Hunan, Zhejiang and Liaoning. Production of all the floriculture products registered significant growth during the last decade. The traditional varieties, mainly landscape trees, are multiplied and sourced locally,

whereas for cut flowers, the material is usually sourced from breeders abroad, although a few varieties are bred locally. Most farmers tend to use a mix of organic and inorganic fertilizers, as well as biofertilizers on their farms. Greenhouse structures for floriculture production are now also fabricated locally and since 2009 the regional governments also provide subsidies for such production structures.

The China Flower Association (CFA), established in 1984, with a membership comprising enterprises, institutions and individuals, is the national level organization promoting the floriculture sector. At regional level, there are several associations working for the cause of floriculture producers, the major ones being the Yunnan Flower Association (YFA) and Guangdong Flower Association (GFA). **Higher income from floriculture enterprises, as compared to field crops such as wheat, soybean (fifty times) or vegetables like tomato (five times), encourages farmers to diversify into floriculture.** The Government of China considers floriculture to be a new and high tech industry and encourages investments in the sector with preferential policies for credit support and infrastructure subsidies. China is making efforts at improving its capabilities in production value and export earning through better production infrastructure, IPR compliance, research and extension services and PHM infrastructure.

A group of senior officers as part of an International Study Tour; **“Senior Executive Development Programme on Effective Organizational Leadership for Senior Officers of Indian Council of Agricultural Research”** including part of authors visited Chinese Academy of Agricultural Sciences, Ministry of Agriculture, Beijing and Modern Agricultural Science Demonstration Technology Park, Xiaotangsham, Changping District in April 2018. According to the authors, emerging from the study in China, following are the recommended strategies for India to encourage floriculture for socio economic upliftment of marginalized women.

- Recognizing floriculture as a priority area for development in the agriculture policies
- Encourage women in floriculture sector particularly in grading, packaging, planting material production through tissue culture, orchid farms and Eco Tourism parks
- Enable planning of appropriate development programmes/projects for collaboration with countries such as China
- Facilitate exchange of experts/technicians and capacity building initiatives
- Explore emulation of innovative models including flori-tourism
- Promote Public Private Partnership (PPP) initiatives in establishing floriculture technology and demonstration parks to benefit women
- Nurture women entrepreneurs and incubate flori-enterprises, enabling them to scale up innovations in floriculture, down-stream processing etc.

## Conclusion

Floriculture has emerged as an important agribusiness, providing /livelihood/ employment opportunities and entrepreneurship. The floriculture industry has an immense potential and opportunities in future which can provide avenues for women entrepreneurs to sustain their livelihood and contribute to the economy.

The selected success stories of women in the floriculture industry highlight that dry flower as a cottage industry needs to be promoted. Government incentive for dry flower entrepreneurship development and exports is the need of the hour. Training programs on dry flowers should be further strengthened. Systematic market survey and information generation for domestic and international market is required for better understanding the scenario and to face the upcoming challenges. Traditional knowledge and modern innovations should be used for addressing challenges.

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Khan Firdaus Masarrat Rashid\* and Srinivas Suriseti\*\*

## Financial Literacy of Women in Hyderabad: An Exploratory Study

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### Abstract

*Financial inclusion and financial literacy are well-established enablers of financial development. In India, women have emerged as a dominant target for financial literacy training bundled with banking and micro-credit services. However, the policy initiatives are not the outcome of a strategic, gender disaggregated analysis, rather the outcome of feminization of poverty with poor perspective on women's financial needs and experiences. The current study aims to dig beyond the rhetoric of empowerment and focus on an antithetical sample so that the illusive construct of financial literacy can be further explored. Exploratory Factor Analysis extracted 6 latent factors ( Endurance, Family safety net, Knowledge updation, Self-efficacy, Focused orientation and Agency) found to be significant as explanatory variables of financial well being. With a nuanced understanding of women's financial literacy Govt. policy can broaden beyond mere access to financial resources and sharply focus on human capital inputs and interventions for women, informed by a gender disaggregated database.*

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### INTRODUCTION

Financial inclusion and financial literacy are key enablers of financial development. However, an over-whelming variety in financial services/products along with threat of fraud has led to an urgent need to understand financial implications and make informed decisions regarding one's personal financial well-being. Financial Literacy is gaining a lot of attention from international development agencies, Governments, financial service providers. According to the World Bank (2012), one of the major reasons that people get involuntarily excluded from developmental initiatives is due to poor financial literacy. A formidable proportion (75%!) of Indians exhibit inadequate understanding of inflation, compounding, risk diversification and other such key financial concepts (Gunther & Ghosh, 2018; Klapper et al, 2015). Indian women consistently score less than males and only 1% of Indian women can be

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acknowledged as highly financially literate (NCFE, 2014). Not just in India, empirical studies across the globe have raised an alarm about low financial literacy with a clear gender gap and need for meaningful financial education (Iqbal and Sami, 2017; Lusardi et al, 2014; OECD, 2005, 2013; Van Rooij et al, 2007).

Waking up to the challenge of financial educational needs of a vast proportion of the Indian population, apex body Financial Stability & Development Council along with central bank RBI has adopted a three-pronged strategy: extending banking services to the unbanked, offering greater access to microcredit and educating selected target groups on key financial concepts and developing requisite skills. Women have invariably emerged as a target of financial inclusion initiatives in India - not as the outcome of a strategic, gender disaggregated effort but rather due to phenomenon of “feminization of poverty” (Thibos, Lavin-Loucks and Martin 2007). MFIs & SHGs focus on women because of high repayment rates and a dread of social ostracization due to loan default. Consequently, women beneficiaries of financial inclusion programs end up both financially and emotionally distressed by programs that are erroneously designed by a largely male dominated, insensitive establishment (Swamy, 2014.) that assumes economic power means empowerment and that household is a unitary whole as well as the unit of change (Subramaniam, 2006). However, the ground reality for urban and rural women alike is that earning an income is not the same as controlling it. According to NFHS-3, (2005-06) as cited by Nayak and Mahanta (2008), 39% of teenage girls & 13% women in their 40s have no say in the use of their own earnings. 8% of women from the highest wealth group also do not participate in use of their own income/earnings. Thomas (1990) has pointed out that household income or financial assets can be a source of power and violence against women, often undermining women’s capacity to control their own earnings.

Unequal household responsibilities and childcare are major barriers to women’s work-force participation (ABS, 2017) and financial well-being (Huston, 2010). According to Census data (2011) of all Indian households, 13% are female led (69% being widows, 3% divorced or separated women & about 4% spinsters) The remaining 25% of women-led households are being led by married women, as their husbands have abandoned their economic responsibilities. Being involved either directly or indirectly in household decision-making, financial burden of childrearing and the inter-generational passing on of financial attitudes and behaviour there is a need to explore women’s financial needs from the perspective of woman as an economic unit. An IFC/McKinsey Research, 2011 has found that globally, on an average, 60% of microenterprises, 25% small businesses and 8% medium businesses are owned by women. Financial Inclusion programs fail to empower the woman micro-entrepreneur to scale up her business. The natural progression towards higher business growth is empirically missing for female micro business owners. OECD (2017) recommends that there is a need to “reduce barriers to women’s entrepreneurship through policies that support equal access to finance, prohibit discrimination based on sex



or marital status . . . and increase women's financial education." Gender disparity in earnings, career breaks due to family priorities, socially defined gender roles, tendency to put oneself at the bottom of the priority list, high opportunity costs of meager resources- the interplay of all these factors ultimately defines financial literacy needs and overall financial well-being of women (Worthington, 2008). There is a dire need to dig further into the social and gendered barriers hindering women's financial well-being.

## Literature Review

Several definitions of financial literacy abound in literature: from management of money (Noctor et al, 1992) to staying debt-free (CBF, 2004); steering clear of fraud and misinformation (Raven, 2005) to developing financial skills such as budgeting and investing. Remund (2010) describes it as "ability and confidence" related to both short-term and long-term financial decision making. Hogarth (2006) provides one of the most comprehensive definitions, stating that financial literacy is "a complex, multi-dimensional concept comprising of knowledge, skills, experiences and dispositions that could be gender-related and....vary over life cycle."

Despite the fairly extensive literature available on the topic, there is little consensus on the definition of financial literacy and conceptually the literature is plagued with conflicting layers of understanding. Financial literacy is often conflated with financial knowledge (Lusardi, 2008) or financial capability (FSA, 2006 as cited by Atkinson et al, 2007). Besides, there is an unjustified assumption that greater financial knowledge will lead to financially responsible behavior. Also, the observable, measurable outcome of financial literacy education is arbitrarily taken to be increased savings or investment in equity shares. In subsistence economies or cultures with community ownership of resources or in developing countries will poorly developed financial markets such a stated outcome creates validity issues.

The measurement of financial literacy, unlike definitional disparity, is surprisingly similar with a heavy focus on knowledge about interest rate calculations, interest compounding, inflation and risk diversification, as well as an emphasis on behaviour related to financial planning and stock market investments (Bernheim, 1998; Rooij et al, 2007; Lusardi & Mitchell, 2010; MasterCard Worldwide, 2010; Almenberg & Dreber, 2015.) Other similar measures are debt literacy (Lusardi & Tufano, 2009); and attitude towards mutual funds (Noth & Puhan, 2009). The literature acknowledges that these are consequential financial decisions whereby life cycle stage, timely training, closed loop of learning-by-doing, personality type and cultural beliefs will all matter besides cognitive skills, educational qualification, opportunity to gain knowledge, etc. (OECD, 2013).

Literature aptly highlights that financial literacy is a complex, multi-dimensional concept. Yet most of the constructs and covariates are defined and measured with a very westernized orientation over-emphasizing preferences and experiences in

formal, organized financial systems. There is a need to further explore the interplay of reported and suggested factors such as financial awareness, knowledge, skills, attitude and behaviour along with household dynamics of decision making, socialization of financial beliefs and practices, diversity of financial experiences, self-efficacy, etc. The social construction of financial literacy is an aspect that requires further study. What are the underlying factors that lead to the low level of financial literacy of women across the globe, cutting through location, age, income, employment and other such demographic factors? Can there be yet unexplored factors that shape and comprise of financial literacy that have escaped mainstream research? What are the underlying variables that cause a woman (urban-rural, educated-uneducated, salaried-dependent) to fail to plan for her own financial well-being in the long term?

### **Research Objectives**

- To examine the factors shaping financial literacy of working women in Hyderabad city and extract latent factors that can explain the phenomenon of financial literacy.
- To create a Regression Model explaining the variance in financial well being of working women.

### **Methodology**

Quantitative Research study was designed to undertake Exploratory Factor Analysis (EFA) using SPSS 20. The first step was to generate items for analysis. This was done using three sources - an in depth interview with an expert in microfinance and financial literacy training, a review of published scales relating to financial literacy/financial well-being as well as literature on economic development, household decision making and behavioral finance. 39 items were selected to undertake Exploratory Factor Analysis, in which Principal Component Analysis was applied for dimension reduction. Since the items such as financial knowledge, financial behaviour, financial awareness, etc. are known to be inter-connected, orthogonal rotation was found to be inappropriate and hence Promax Rotation was applied to generate factor loadings.

The research was conducted via Survey method in which an online Questionnaire was mailed through Purposive Sampling. The Questionnaire consisted of 3 parts: Section A carried 39 statements such as: My opinion is taken in decisions regarding household budget/spending; I alone am responsible for daily money management related to my personal income; etc. Section B consisted of a self-reporting measure of financial well-being carrying 6 statements gauging satisfaction with one's savings, assets, investments, current income, personal wealth and financial independence. A 4 point Likert's scale was used for both sections, seeking the respondents' experience with the given statement as being: "exactly true", "moderately true", "somewhat true" and "not at all true". The scale was a measure of forced choice

since no neutral point was provided. Section C consisted of Demographic enquiry of education, age, caste, marital status, no. of dependents, income and type of employment.

Purposive Sampling technique was applied with the following Inclusion-Exclusion criteria to study an antithetical sample that is neither poor nor uneducated nor rural -

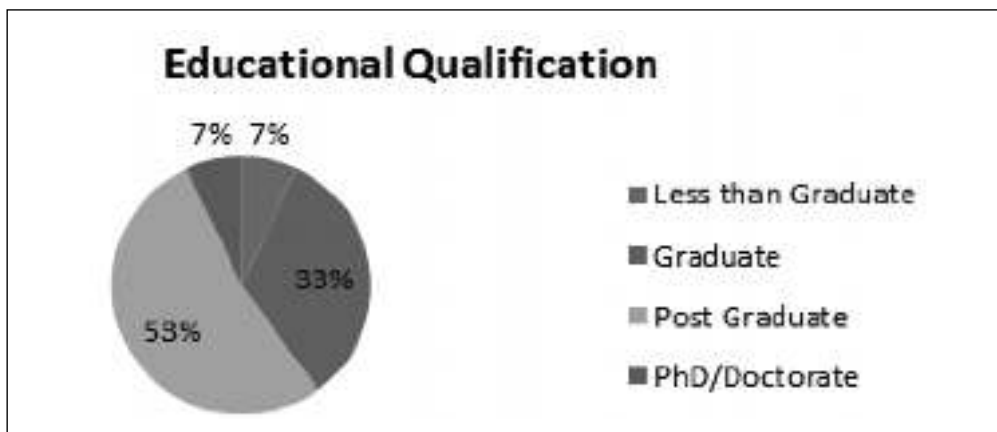
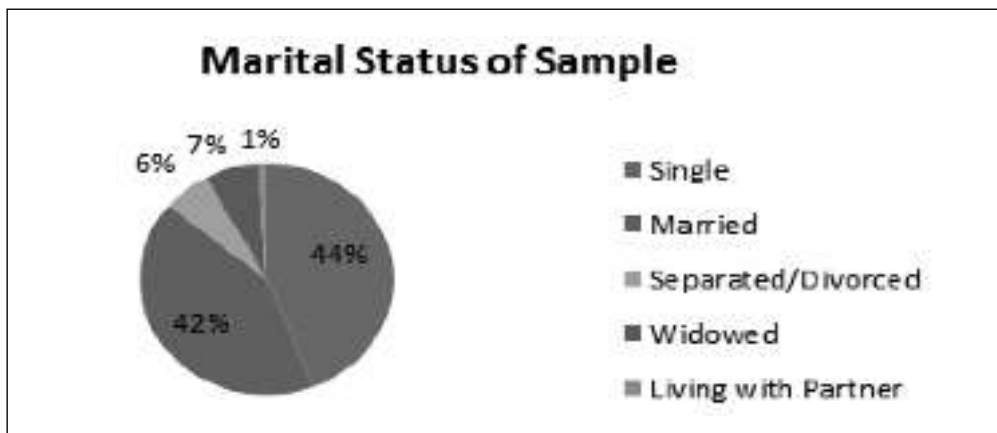
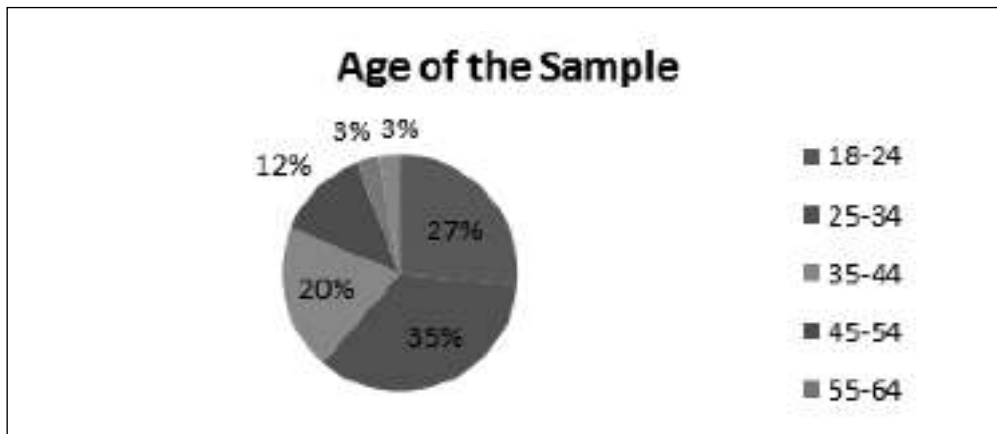
| Criterion Characteristic      | Exclusion Characteristic  | Inclusion  |
|-------------------------------|---|--|
| Gender                        | Male  | Female   |
| Education/Literacy            | Uneducated, illiterate  | Educated and literate  |
| Location                      | Rural   | Urban  |
| Employment capital or income) | Unemployed  | Employed (access to  |
| Financial maturity            | Having poor access to financial information with poor financial experiences | Access to financial information & varied financial experiences |

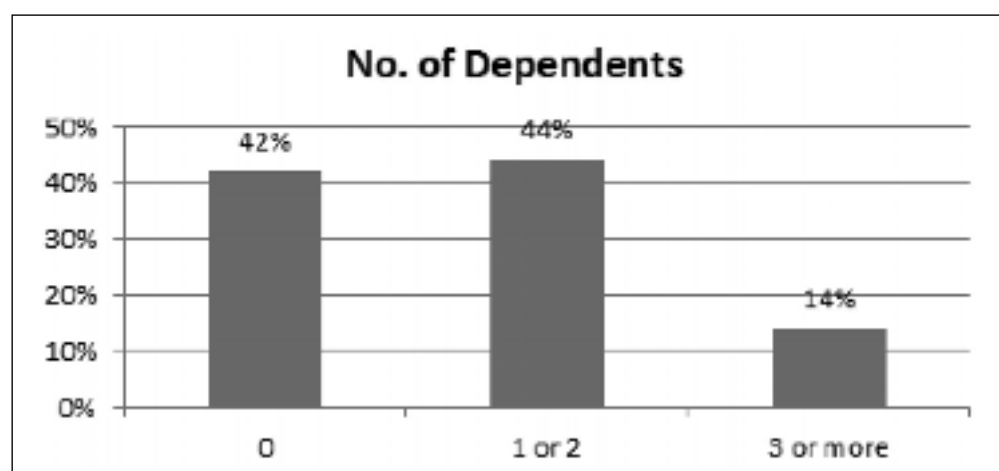
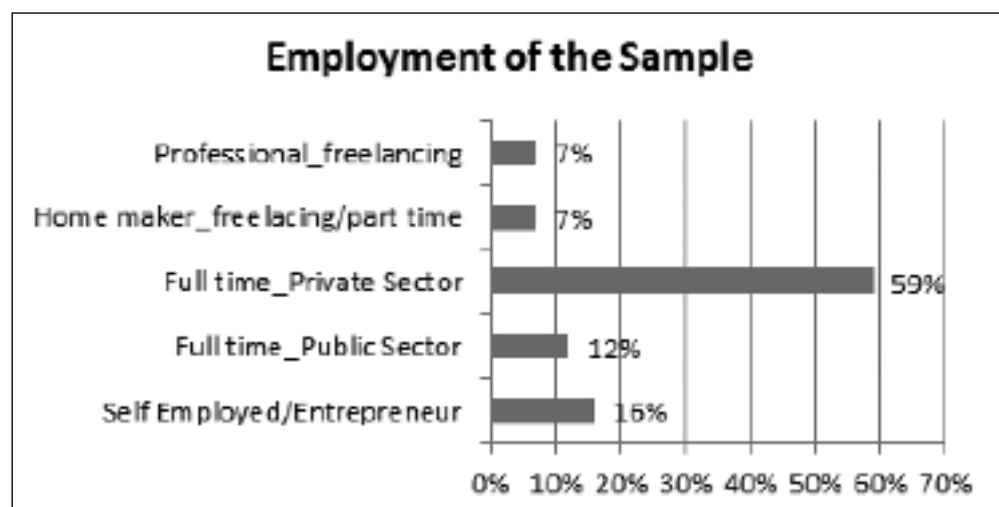
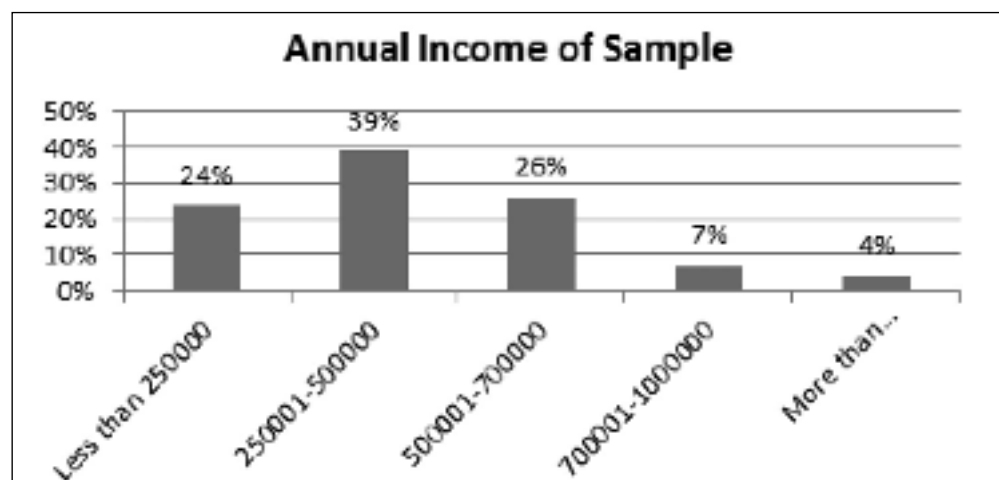
## Results

The online Questionnaire titled “Women and Finance” (so named as to avoid predisposition bias in the respondent’s mind) was mailed to 350 female employees, entrepreneurs and home makers, of which 230 fully filled questionnaires were useful for this study.

### (A) Descriptive Statistics

The sample consisted of a dominantly youthful population with average age 35years. 82% of the sample was between the ages 18 to 44 years. 53% (121) were Post Graduates and 33% (76) Graduates. The proportion of singles (102) to married women (96) was almost equal at 44% & 42% respectively. Average annual salary or income was about Rs.45000, with only 4% (10) reporting an annual salary or income greater than Rs. 1000000/- As regards employment, 59% (136) were full time employees in the private sector and 7% (16) were home makers with part-time or freelancing work. 76% (176) were from the General category, while 24% (54) were from SC/ST/OBC category. 44% of the women (101) reported having 1 or 2 dependents on their income, while 14% (33) had more than 3 dependents. The following charts provide the complete picture -





**(B) Exploratory Factor Analysis (EFA) Using Principal Component Analysis & Promax Rotation:**

**Sample Adequacy: KMO and Bartlett's Test**

|  |          |
|--|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .567     |
| Bartlett's Test of Sphericity Approx. Chi-Square | 4001.370 |
| df   | 741      |
| Sig.   | .000     |

N=230, > 200 (thumb rule) KMO has a thumb rule of 0.6 for sample to be adequate for a Factor Analysis. KMO was just a little on the lower side, but significance outcome of Bartlett's test of Sphericity provided a green signal to go ahead with EFA.

**Reliability Test: Cronbach's Alpha**

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .729             | .705   | 39         |

An alpha between 0.7 and 0.8 is acceptable while less than 0.7 is questionable. The score of 0.729, signaled an acceptable internal consistency between the 39 items.

**Principal Component Analysis**

Using Principal Component Analysis the first extraction gave 10 factors with a cumulative variance explained of 62% However, this violated thumb rule of 65%. Hence, the step was repeated by deleting items with low factor loadings. After several iterations, 6 factors or latent constructs consisting of 18 items emerged with KMO reported as 0.655. Sphericity was significant and Cronbach's alpha was 0.735 for the 18 items.

**Extraction Communalities**

Extraction communalities are estimates of the variance in each variable accounted for by the factors (or components) in the factor solution. The final 18 items exhibited good variance estimates.

### Communalities of final 18 items

| Item   | Extraction | Mean | Std. Dev. |
|--|------------|------|-----------|
| A33: I worry about running out of money in my retirement.  | .621       | 2.49 | 1.005     |
| A27: If I invested in shares, every time the stock market fell I would get worried about losses. | .646       | 2.29 | 1.263     |
| A26: When faced with a financial challenge, I have a hard time figuring out a solution.          | .581       | 2.31 | 1.072     |
| A25: Sometimes I miss payment of bills/rent.   | .663       | 1.71 | .970      |
| A 24: There may be loans or credit cards taken in my name by my family.                          | .648       | 1.96 | 1.117     |
| A21: When unexpected expenses occur I usually have to use credit (or borrow).                    | .635       | 2.62 | 1.164     |
| A23: I depend on the guidance of family members to make financial decisions.                     | .592       | 2.63 | .957      |
| A10: I understand bank overdraft as my bank giving me a loan.                                    | .729       | 3.10 | .998      |
| A11: Gold bonds are a substitute to holding physical gold.                                       | .581       | 2.92 | .990      |
| A20: For good money management, I regularly read finance books or attend finance workshops.      | .681       | 2.23 | 1.058     |
| A18: It is hard to stick to my spending plan/budget when unexpected expenses arise.              | .637       | 2.66 | 1.077     |
| A17: I find it difficult to save and invest regularly.   | .677       | 2.35 | 1.074     |
| A19: It is challenging to make progress toward my financial goals.                               | .701       | 3.15 | .869      |
| A8: I track my income and expenses on a monthly basis  | .638       | 3.29 | .824      |
| A30: I believe that Life Insurance policy should be taken to reduce risk                         | .640       | 3.08 | 1.010     |
| A22: I have learnt about money management by watching my parents since my childhood.             | .580       | 2.77 | .897      |
| A1: My opinion is taken in decisions regarding household budget/spending                         | .758       | 3.39 | .801      |
| A3: I alone am responsible for daily money management decisions related to my personal income    | .759       | 3.08 | .910      |

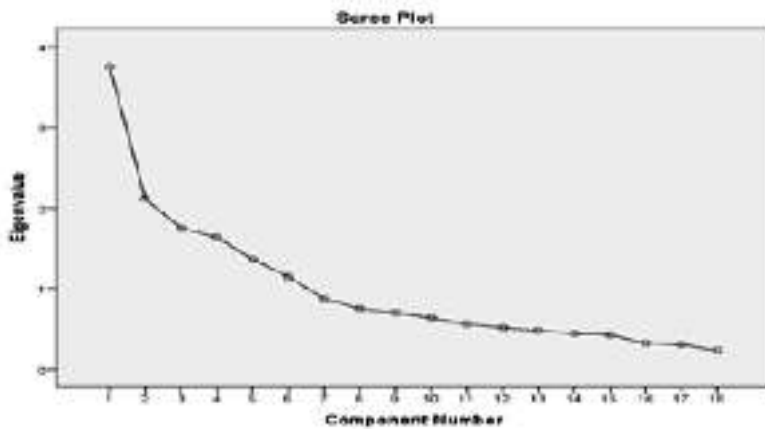
Extraction Method: Principal Component Analysis.

**Total Variance Explained**

| Component | Initial Eigenvalues |               |              | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings <sup>a</sup> |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|--|
|           | Total               | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % | Total  |
| 1         | 3.754               | 20.853        | 20.853       | 3.754                               | 20.853        | 20.853       | 2.732  |
| 2         | 2.116               | 11.756        | 32.609       | 2.116                               | 11.756        | 32.609       | 2.497  |
| 3         | 1.748               | 9.709         | 42.317       | 1.748                               | 9.709         | 42.317       | 1.964  |
| 4         | 1.637               | 9.092         | 51.409       | 1.637                               | 9.092         | 51.409       | 2.333  |
| 5         | 1.361               | 7.561         | 58.971       | 1.361                               | 7.561         | 58.971       | 1.879  |
| 6         | 1.151               | 6.394         | 65.365       | 1.151                               | 6.394         | 65.365       | 1.746  |
| 7         | .866                | 4.814         | 70.179       |                                     |               |              |  |
| 8         | .753                | 4.181         | 74.359       |                                     |               |              |  |
| .....     | .....               | .....         | .....        |                                     |               |              |  |
| .....     | .....               | .....         | .....        |                                     |               |              |  |
| 17        | 305                 | 1.692         | 98.721       |                                     |               |              |  |
| 18        | .230                | 1.279         | 100.000      |                                     |               |              |  |

**Scree Plot**

Scree Plot revealed 6 major inflexion points, beyond which it got more linear, hence 6 factors.





### Structure Matrix

Though the general thumb rule is that each factor should have at least 3 variables with high loadings, the 6<sup>th</sup> factor (having only 2 loadings) was retained as the correlations were high.

The six factors were named: Endurance (END), Family Safety Net (FSN), Knowledge Updation (KNU), Self-Efficacy (SEF), Focused Orientation (FOO) and Agency (AGN).

### Structure Matrix

| Item:<br>Factor | Component |      |      |      |      |      |
|-----------------|-----------|------|------|------|------|------|
|                 | 1         | 2    | 3    | 4    | 5    | 6    |
| A36             | .750      |      |      |      |      |      |
| A29             | .737      |      |      |      |      |      |
| A28             | .695      |      |      |      |      |      |
| A27             | .679      |      |      |      |      |      |
| A26             |           | .744 |      |      |      |      |
| A23             |           | .706 |      |      |      |      |
| A25             |           | .675 |      |      |      |      |
| A12             |           |      | .802 |      |      |      |
| A13             |           |      | .749 |      |      |      |
| A22             |           |      | .713 |      |      |      |
| A20             |           |      |      | .771 |      |      |
| A19             |           |      |      | .762 |      |      |
| A21             |           |      |      | .668 |      |      |
| A10             |           |      |      |      | .766 |      |
| A32             |           |      |      |      | .758 |      |
| A24             |           |      |      |      | .644 |      |
| A1              |           |      |      |      |      | .816 |
| A3              |           |      |      |      |      | .803 |

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

**C) Regression Model of Financial Well Being of Women (Model 1)**

**Independent Variables of Financial Well-being Regression Model**

**Average Variance Explained and Composite Reliability**

| Latent Construct    | Avg. Variance Extracted | Composite Reliability |
|---------------------|-------------------------|-----------------------|
| Endurance           | 0.512                   | 0.808                 |
| Family Safety Net   | 0.503                   | 0.752                 |
| Knowledge Updation  | 0.571                   | 0.799                 |
| Self - Efficacy     | 0.540                   | 0.778                 |
| Focused Orientation | 0.525                   | 0.768                 |
| Agency              | 0.655                   | 0.792                 |

AVE of each factor should be  $\geq 0.5$  and CR of every factor should be  $\geq 0.7$ . Since both these conditions are fulfilled for all, we concluded that the factors are robust in their ability to explain variance and in their internal consistency. Assuming that the 6 factors are independent and uncorrelated (which got confirmed through collinearity statistics) Anderson Rubin method was used to save the 6 factor scores and a regression model of financial well being was generated.

| Model Summary <sup>b</sup>  |                   |                |                   |                            |               |                   |
|---|-------------------|----------------|-------------------|----------------------------|---------------|-------------------|
| Model   | R                 | R Square       | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |                   |
| 1   | .292 <sup>a</sup> | .085           | .060              | .782                       | 1.603         |                   |
| a. Predictors: (Constant), A-R factor score 6 for analysis 1, A-R factor score 1 for analysis 1, A-R factor score 5 for analysis 1, A-R factor score 3 for analysis 1, A-R factor score 2 for analysis 1, A-R factor score 4 for analysis 1 |                   |                |                   |                            |               |                   |
| b. Dependent Variable: FinWellBeing   |                   |                |                   |                            |               |                   |
| ANOVA <sup>a</sup>  |                   |                |                   |                            |               |                   |
| Model   |                   | Sum of Squares | df                | Mean Square                | F             | Sig.              |
| 1   | Regression        | 12.687         | 6                 | 2.115                      | 3.457         | .003 <sup>b</sup> |
|   | Residual          | 136.421        | 223               | .612                       |               |                   |
|   | Total             | 149.108        | 229               |                            |               |                   |
| a. Dependent Variable: FinWellBeing   |                   |                |                   |                            |               |                   |
| b. Predictors: (Constant), A-R factor score 6 for analysis 1, A-R factor score 1 for analysis 1, A-R factor score 5 for analysis 1, A-R factor score 3 for analysis 1, A-R factor score 2 for analysis 1, A-R factor score 4 for analysis 1 |                   |                |                   |                            |               |                   |

Though the R Square and Adjusted R Square are low (8.5% and 6%), we cannot discard the model since ANOVA test shows regression model is significant. Also, Durbin-Watson score is 1.6 (close to 2) indicating no autocorrelation between the residuals of the regression model.

**D) Non-Parametric Testing of Demographic Variables of the study:**

7 hypotheses were set up to test whether financial literacy is significantly different due to each of these demographic factors.

H<sub>1</sub> : There is significant difference in Financial Well being due to Age.

**Hypothesis Test Summary**

|   | Null Hypothesis   | Test                                    | Sig. | Decision                    |
|---|---|---|------|-----------------------------|
| 1 | The distribution of FinWellBeing is the same across categories of Marital Status. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

H<sub>2</sub> : There is significant difference in Financial Well being due to Marital Status.

**Hypothesis Test Summary**

|   | Null Hypothesis  | Test                                    | Sig. | Decision                    |
|---|--|---|------|-----------------------------|
| 1 | The distribution of FinWellBeing is the same across categories of Education. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

H<sub>3</sub> : There is significant difference in Financial Well being due to Education

**Hypothesis Test Summary**

|   | Null Hypothesis  | Test                                    | Sig. | Decision                    |
|---|--|---|------|-----------------------------|
| 1 | The distribution of FinWellBeing is the same across categories of Caste. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

H<sub>4</sub> : There is significant difference in Financial Well being due to Caste.

**Hypothesis Test Summary**

|   | Null Hypothesis  | Test                                    | Sig. | Decision                    |
|---|--|---|------|-----------------------------|
| 1 | The distribution of FinWellBeing is the same across categories of Caste. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

H<sub>5</sub> : There is significant difference in Financial Well being due to Income.

**Hypothesis Test Summary**

| Null Hypothesis   | Test                                    | Sig. | Decision                    |
|---|---|------|-----------------------------|
| The distribution of FinWellBeing is the same across categories of Employment. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

H<sub>6</sub> : There is significant difference in Financial Well being due to Employment.

**Hypothesis Test Summary**

| Null Hypothesis   | Test                                    | Sig. | Decision                    |
|---|---|------|-----------------------------|
| The distribution of FinWellBeing is the same across categories of Dependents. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

H<sub>7</sub> : There is significant difference in Financial Well being due to Number of Dependents.

**Hypothesis Test Summary**

| Null Hypothesis   | Test                                    | Sig. | Decision                    |
|---|---|------|-----------------------------|
| The distribution of FinWellBeing is the same across categories of Dependents. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

Of these 7 demographic factors marital status, caste and employment are string variables, hence they were left out while the remaining 4 variables were added with the latent constructs to generate a second Regression model.

| Model Summary <sup>b</sup> |                   |          |                   |                            |                   |          |     |     |               |               |
|----------------------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|---------------|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |     |               | Durbin-Watson |
|                            |                   |          |                   |                            | R Square Change   | F Change | df1 | df2 | Sig. F Change |               |
| 2                          | .331 <sup>a</sup> | .110     | .069              | .783                       | .110              | 2.664    | 10  | 216 | .004          | 1.690         |

a. Predictors: (Constant), INC, A-R factor score 1 for analysis 2, A-R factor score 6 for analysis 2, A-R factor score 5 for analysis 2, A-R factor score 3 for analysis 2, DEP, A-R factor score 2 for analysis 2, EDU, A-R factor score 4 for analysis 2, AGE

b. Dependent Variable: FinWellBeing

| ANOVA <sup>a</sup> |            |                |     |             |       |                   |
|--------------------|------------|----------------|-----|-------------|-------|-------------------|
| Model              |            | Sum of Squares | df  | Mean Square | F     | Sig.              |
| 2                  | Regression | 16.352         | 10  | 1.635       | 2.664 | .004 <sup>b</sup> |
|                    | Residual   | 132.579        | 216 | .614        |       |                   |
|                    | Total      | 148.931        | 226 |             |       |                   |

a. Dependent Variable: FinWellBeing

b. Predictors: (Constant), INC, END, AGN, FOO, KNU, DEP, FSN, EDU, SEF, AGE

By increasing the predictor variables from 6 to 10, there is an improvement in the model's R squared and the model is significant. If the process of exploration continues, a robust predictive model can ultimately be generated.

## Discussion

The study has explored several aspects of the illusive construct financial literacy. 39 items got reduced to 18 by Exploratory Factor Analysis and the factor loadings, total variance explained, average variance explained and composite reliability - all lead to the conclusion that the six factors extracted from the study are robust, valid and reliable. The unique contribution of the study is the set of six factors extracted. Each can be explained in the following manner:

**Factor 1: Endurance** - The ability to face uncertainty or a financial challenge without giving up on the financial goal is an aspect of financial literacy. A financially literate person is open to uncertainty and even tries to benefit from it by investing in market related investments such as shares, real estate, etc.

**Factor 2: Family Safety Net** - This factor is adversely related to financial literacy. The more a woman depends on the family for advice or to meet financial exigencies, the lower is her financial literacy. In India, it is a cultural trend to take loans or property in the name of the wife without her involvement in these decisions. Such a safety net provided by the family actually works against the long term strategic well being of the woman. This is in line with the observation made by Hsu (2011) that women show no interest in proxy financial decisions unless the spouse begins to lose cognitive function and the woman has to accept the probability of out-living the spouse.

**Factor 3: Knowledge Updation** - Given the complexity and variety of financial products and services along with greater consumer rights, it is the woman's onus to stay abreast with macro-economic factors, product upgrades and new technological aspects of financial service. Greater the effort put into exploring and using sources of information, better is the financial literacy.

**Factor 4: Self - Efficacy** - The greater the self-belief that the woman possesses regarding her ability to manage money and to progress towards her financial goal, better is the financial decision making. Self doubt on the other hand causes a kind of self-imposed psychological and social exclusion that the woman thrusts upon herself and invariably creates financial vulnerabilities for the future.

**Factor 5: Focused Orientation** - Sooner the woman picks up money management lessons in life and creates a disciplined perspective towards expenses and foreseeable risks, greater is her financial literacy.

**Factor 6: Agency** - The more a woman finds voice in household money management matters as well as in the application of her own funds, greater will be her financial literacy.

The study confirms earlier studies that financial well-being is significantly impacted by certain demographic factors. Thus as far as exploring the factors that comprise of or correlate with financial literacy and impact financial well being are concerned, ten factors are found to be significant: Income, Endurance, Agency, Focused Orientation, Knowledge Updation, No. of Dependents, Family Safety Net, Education, Self - Efficacy and Age.

As regards the second objective of the study, the ten variables are found to be significant however the model has poor predictive power. Besides the obvious reasons that there could be more factors that need to be included and that the sample size is not large enough to carry predictive power, another aspect needs to be kept in mind. There is a tacit assumption among academicians and researchers that financial literacy leads to financial well being. However, there is not a single study (to the authors' knowledge) that has actually tested this causal relationship! An immediate contradiction of this claim is that external/systematic factors can majorly impact well being. The best example is that of subprime crisis. Several 'prime' or eligible mortgage owners too faced economic crisis due to the rampant fraud and real estate bubble, bringing down their financial well being though they themselves may have been disciplined and skilled in managing financial resources. The weak regression model may be reflective of the fact that financial literacy may not be a predictor but merely an enabler. Another aspect is that psychological factors can dominate the construct of financial well being requiring a Behavioral Theory perspective. Consequently, the theme of financial literacy and its relation with financial well being is yet an unexplored topic and the current study is an initial step in that direction.

### **Policy issues and Suggestions**

Financial Literacy of women is a topic of great significance and requires sensitivity to the unique experiences and status of women in India. Intra household resource allocation is not equal so there is a need to separate women's income & decision - making from household income & decision-making. There is a dire need to de-link financial literacy from financial inclusion. There exist latent factors relating to household gender roles and expectations, patriarchal systems of dependency and psychological factors such as self-efficacy, inertia, etc which cannot be addressed through short term financial literacy training. Focusing on literacy training bundled with financial inclusion leads to blurring of issues.

There is an urgent need for gender disaggregated data such as total stock market investments, land ownership, loan liability based on gender so that a clear picture can emerge. What are barriers and enablers of women's financial literacy? How do

women experience financial literacy? What importance do they attain to financial well-being? Being a quantitative dip-stick survey, the study merely scratches the surface of a deep-seated, multi-layered, inter-disciplinary issue. This is a discourse that has to be unleashed and given due credence with more stakeholders stepping in and shaping customized design and delivery of human capital interventions and financial services for women.

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## Bhagya: An Innovative Approach to Adolescent Health and Nutrition

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### Abstract

*Health status of the people is an important indicator of Human development. Aspects like health, balance diet and hygiene are the integral part of Millennium Development Goals. Telangana being the youngest State in the country aims to achieve these goals by improving the health conditions of the people especially the youth.*

*The Commissionerate of Collegiate Education, Telangana, has identified the need of better health in the state and initiated a healthcare programme called 'Bhagya.' This initiative imparts health education to students of government degree colleges in Telangana. Bhagya came into being after meticulous need assessment, wherein it was identified that adolescence is the best time to enlighten youth about well-being and hygienic practices.*

*Introduced in 2015, Bhagya succeeded progressively by training the Lecturers to become eligible health coordinators in colleges. The Coordinators organize health-awareness programmes and check-ups to improve the health conditions of students for a better future.*

*This paper attempts to present the uniqueness, contribution and future plans of Bhagya.*

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### INTRODUCTION

India is a country widely known for its diverse culture and we abide by the slogan "unity in diversity." However, this same slogan can't be chanted when it comes to healthcare and welfare of the nation. It is a hard reality that nothing in healthcare policy mirrors unity and the top-down approach has made the delivery of healthcare even worse. There is huge disparity in the way healthcare is delivered to cross section of people living in different parts of India. Given the health status of people, it is important to realize that health is not merely the responsibility of the Government but it is a concerted effort of various departments of the government (such as Education, Water and Sanitation, Women and Child Development, Rural

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Development, Social Welfare etc ) which are responsible to uplift the status of wellbeing in the country.

The healthcare scheme 'Bhagya' launched by the Commissionerate of Collegiate Education (hereafter CCE) in the state of Telangana has fully utilized resources of the department of education to communicate and channelize the programme in a systematic manner.

The Bhagya initiative aims to enlighten adolescents in institutions of higher learning to be conscious of their health and wellness which will eventually contribute to healthier workforce and nation building.

### **Health scenario of Telangana: Brief Profile**

The state of Telangana, youngest among all states of India, was formed on 2 June, 2014. In order to bring about transformation in the health status of the people of the state, a comprehensive family survey was carried out on 19 August, 2014. The focus of the survey was to ascertain the health status of people in terms of their longevity, mortality, fertility, nutritional levels and other forms of non-communicable diseases. The survey identified certain health issues which required urgent administrative attention as they posed serious challenge to the society. These health problems included nutritional deficiencies among pregnant women, burden of ageing, infant mortality rates (IMR), maternal mortality rate (MMR), occurrence of diseases like malaria, leprosy, cancer, and HIV & AIDS. This survey helped to identify gaps in the healthcare sector of the state and facilitated in developing strategies to respond to the problems.

CCE recognized the potential of health education campaigns and chose it as the pivotal vehicle to sensitize adolescents, youth and community members, encouraged Government Degree Colleges (GDCs) in the state to actively participate in public health management and motivated them to develop health care policies for maintaining health and hygiene of the students.

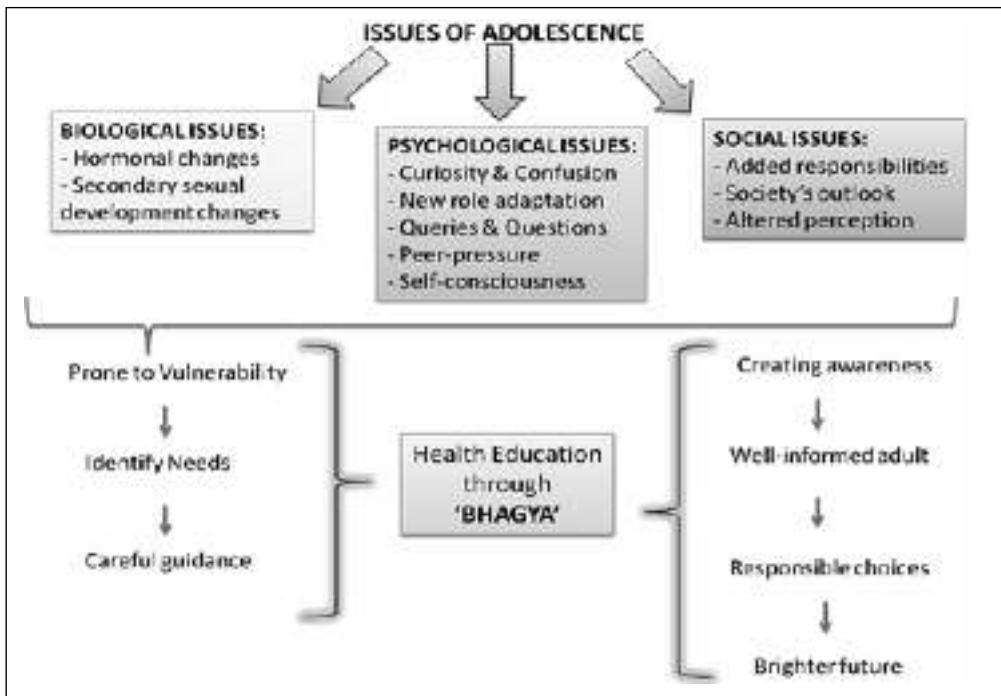
### **Adolescent Health and Issues: Story of Bhagya initiative, Telangana**

Adolescence begins with the onset of puberty. As per the definition of UNICEF, adolescence refers to "sequence of events by which the individual is transformed into a young adult by a series of biological changes." During this period, the curiosity and urge to learn of the adolescents is at its peak which makes it valuable to impart information on health and safety to them.

Studies have shown that minds of the young students can easily absorb health practices taught to them which eventually induce changes in their health-related behavior. It was against this context that CCE conceptualized the Bhagya initiative.

Nelson Mandela said, ‘Education is the most powerful weapon which you can use to change the world.’ CCE thus chose health education as a tool to sensitize adolescents about various aspects of health, hygiene and sanitation. As part of the Bhagya initiative, several programs were launched to improve the health status of students studying in GDCs. The initiative focuses on adolescents who go through a crucial phase wherein their bodily changes need great attention and care. Figure 1 (below) illustrates the issues of adolescence and the strategy adopted by Bhagya to address those problems.

Figure 1: Adolescence and Bhagya



Bhagya has several features to improve health conditions of students, especially women. They are as follows:

- 1 • Providing toilets in all the Degree Colleges without exception.
- 2 • Devising a comprehensive plan to orient students towards a cleaner society.
- 3 • Constituting Student "Health and Hygiene club" in every Degree College in the State.
- 4 • Monitoring primary Health parameters of girl students like check-ups for HB levels (Anaemia) by providing Iron and Folic Acid tablets, administering de-worming medicine, anti hepatitis vaccines.
- 5 • Empowering women students, who will be prospective mothers, by providing them training in Health and Nutrition.
- 6 • Maintaining health record of students with height and weight to measure Body Mass Index (BMI), Blood Pressure (BP), Blood Sugar and HB levels with periodical updating.
- 7 • Providing awareness of various communicable diseases and preventive health care measures.
- 8 • Involving students in effective community service as part of institutional social responsibility.
- 9 • Providing Incinerators, sanitary napkin vending machines etc in all colleges.
- 10 • Conducting free health camps in the College in collaboration with Government hospitals, Red Cross, Lions Club

The Department of Collegiate Education conducted residential training on 'Health Initiatives and Adolescence' - Bhagya for selected staff of GDCs in collaboration with the Indian Institute of Health and Family Welfare, Hyderabad. Between November, 2015 to July, 2017 the trainings were conducted in 7 phases wherein each phase was for three days. The broad topics of the training programme were Introduction to Adolescence; Reproductive Health, Management of Menstrual Hygiene; Health and Nutritional Needs of Adolescents, Balance diet and Cooking Tips, Counselling Skills; Mental Health; Government schemes (National and State) on health for adolescents. The teachers who received training on adolescent health and hygiene were then appointed as health coordinators in their respective colleges and were entrusted with the responsibility to carry out awareness campaigns on health-related issues, organize health camps and conduct counselling sessions with the help of district health/medical officers.

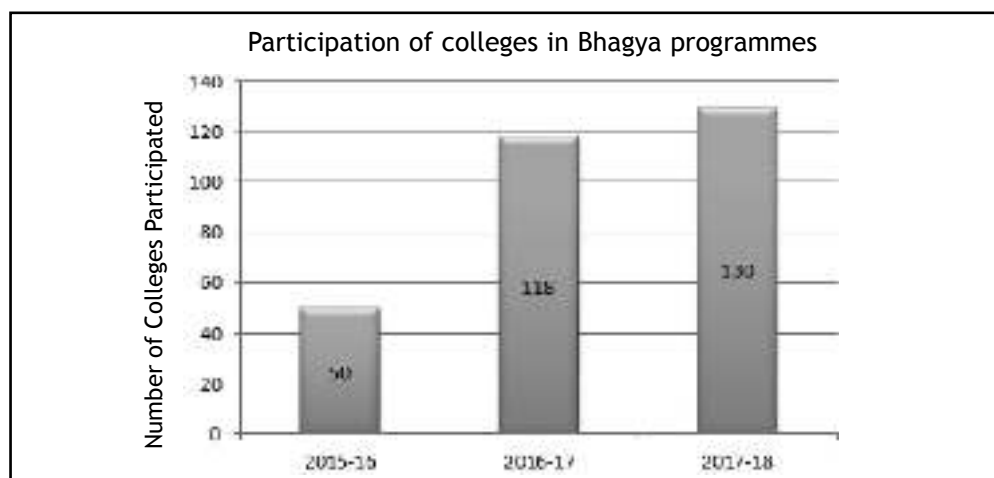
### Contribution of Bhagya towards better health

Women's health in our country is always neglected by the family. They have limited decision-making power within household and restricted mobility and these severely impact the health status of women. Women also face a lot of disparity when it comes to receiving the same kind of care and attention in the health sector. Moreover,

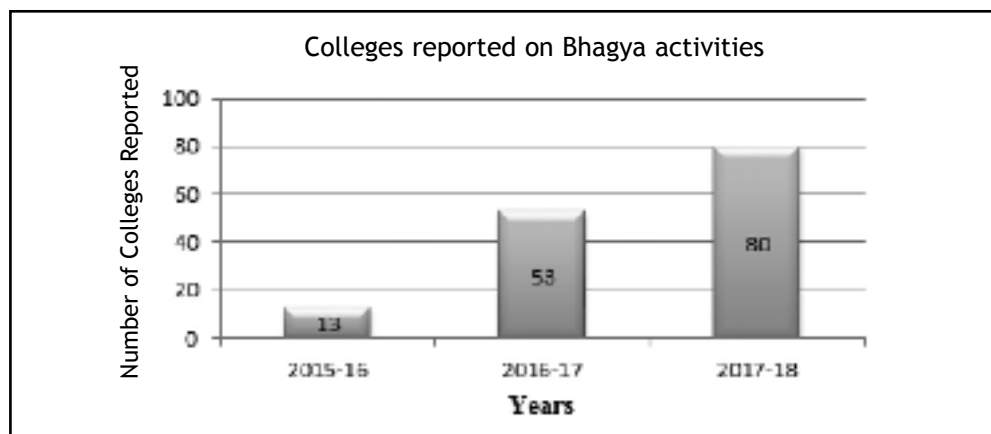
discussions on certain topics such as reproductive health, safe sex, menstruation are taboo in most households. This culture of silence hinders adolescents from gaining adequate information about their health and body. The mind-set of many people in the rural areas discourages women to disclose any health problems. Bhagya was envisioned as an initiative which will subtly challenge social norms related to women's health and endeavour to bring about social transformation. The awareness programmes conducted in colleges on nutrition, reproductive health, menstrual hygiene all aim at creating awareness among students, family and community and also to help girls overcome their inhibitions and share their health issues with the health coordinators.

The figures below highlight the degree of involvement of GDCs in Bhagya program over a period of three years from 2015-2017.

**Figure 2:** Participation of colleges in Bhagya



**Figure 3:** Reporting of activities conducted under Bhagya



In 2015-16, each college had conducted 1 to 3 activities, with an average of 2 activities per college. By 2016-17, the activities per college increased to 3 to 5, with an average of 4 activities per college. The academic year 2017-18, has seen the most favourable outcome, the activities in some colleges ranged between 5 to 13 activities with an average of at least 8 activities in each college.

The table below enumerates some of the salient activities undertaken by selected GDCs to improve the health status of their students as well as of their faculty and staff.

**Table1: List of Activities conducted under Bhagya in selected GDCs (2017)**

| Name of the College                    | 2017 - 2018  |
|--|--|
| M.V.S GDC,<br>Mahabubnagar             | <ul style="list-style-type: none"> <li>- Health checkup camp, haemoglobin test, blood grouping tests</li> <li>- Awareness sessions on Menstrual hygiene, Nutrition on National Nutrition Week, World Suicide Prevention day, blood donation</li> <li>- Initiation of First-aid service, Health Insurance to students</li> <li>- Celebration on World Yoga Day, World Food Day</li> </ul> |
| GDC (W), Khammam                       | <ul style="list-style-type: none"> <li>- Seminar on importance of Yoga- Awareness programme on Prevention of Drug Abuse</li> <li>- Celebration of National De-worming Day, World Mosquito day, National Nutritional Week</li> </ul>  |
| NM GDC, Jogipet                        | <ul style="list-style-type: none"> <li>- Health checkup</li> <li>- Distribution of iron, calcium, vitamin A, D and B complex tablets, skin ointments, eye drops</li> <li>- Traditional food festival, blood grouping tests, HB tests, dental health camp</li> <li>- National Round worm Eradication Day</li> </ul>   |
| GDC, Gajwel                            | <ul style="list-style-type: none"> <li>- Awareness programme on Prevention of Drug Abuse, Self Defense techniques by Rudramadevi Self Defense Academy</li> </ul>   |
| GDC, Alair                             | <ul style="list-style-type: none"> <li>- Celebration of World Food Day, national Nutrition Week, World Iodine Prevention day</li> <li>- Seminar on importance of breast feeding</li> </ul>   |
| GDC, Hayathnagar                       | <ul style="list-style-type: none"> <li>- Lecture on menstrual hygiene, kidney ailments, drug abuse</li> <li>- Quiz programme on infectious diseases,</li> <li>- Poster presentation on food habits</li> </ul>  |
| GDC, Khairatabad                       | <ul style="list-style-type: none"> <li>- Awareness programme on Health and Hygiene of Women, Adolescent Health &amp; Nutrition</li> <li>- Health survey among students</li> </ul>  |
| Indira Priyadarshini<br>GDC (W), Medak | <ul style="list-style-type: none"> <li>- Celebration of World Food Day</li> <li>- Awareness programme on Home remedies</li> </ul>  |

|   |  |
|---|--|
| Indira Priyadarshini<br>GDC (W), Nampally | <ul style="list-style-type: none"> <li>- Awareness programme on Prevention of Drug Abuse</li> <li>- Pink Ribbon Club Walk for breast awareness</li> </ul>  |
| GDC (W), Sangareddy                       | <ul style="list-style-type: none"> <li>- Breastfeeding week celebration</li> <li>- National Filariasis Day</li> <li>- Dental checkup</li> </ul>  |
| GDC (W), Begumpet                         | <ul style="list-style-type: none"> <li>- Eye screening camp</li> <li>- Mosquito Awareness Day Celebrations</li> </ul>  |
| Pingle GDC,<br>Waddepally                 | <ul style="list-style-type: none"> <li>- Awareness programme on Reproductive Health &amp; Hygiene, dengue</li> <li>- World Breast feeding Week, fostering sensitivity towards health &amp; hygiene, celebrations.</li> <li>- Blood grouping tests, Hb count, free eye checkup in collaboration with Vasan eye care, Warangal, medical camp in collaboration with Prashanthi Hospitals</li> <li>- Distribution of Health cards and conducted health survey</li> </ul> |
| SRR GDC, Karimnagar                       | <ul style="list-style-type: none"> <li>- Awareness programme on anaemia and distribution of folic acid</li> <li>- Celebration of Zoonsis Day by Dr.A.Raj Kumar, Population Day, Breast Feeding Week, World Nature and World Animal Day, World Wild Life Day, Global Hand Washing Day</li> </ul>  |
| GDC, Bhainsa                              | <ul style="list-style-type: none"> <li>- Drug Awareness by Sri.A.Raghu and Sri.Venkatesh, Bhainsa</li> <li>- Awareness Programme on Ayurvedic Medicine by Dr.Praveen, Nizamabad</li> <li>- Ozone Day celebration</li> </ul>  |
| GDC, Gambhiraopet                         | <ul style="list-style-type: none"> <li>- Awareness programme on Swine Flu, National Nutrition Week, Personal health &amp; Hygiene for Girls</li> <li>- Distribution iron and folic acid tablets</li> </ul>   |
| GDC, Madhira                              | <ul style="list-style-type: none"> <li>- Celebration of World Yoga Day, Blood Donor Day</li> <li>- Awareness programme on Prevention of Drug Abuse</li> <li>- Pulse Polio Vaccination Drive programme</li> </ul>   |
| SR&BGNR GDC,<br>Khammam                   | <ul style="list-style-type: none"> <li>- Awareness sessions on Menstrual Hygiene, Dental Health, Polio</li> <li>- World First-aid Day celebrations</li> <li>- Blood pressure checkup</li> </ul>  |
| GDC, Koratla                              | <ul style="list-style-type: none"> <li>- World Yoga Day Celebrations</li> <li>- Awareness programme on Prevention of Drug Abuse by Sri. K. Vidya Sagar, Sexually Transmitted Diseases, Health &amp; Hygiene for Women</li> <li>- Blood grouping tests</li> </ul>   |



|                                  |   |
|----------------------------------|---|
| GDC, Patancheru                  | <ul style="list-style-type: none"> <li>- Awareness programme on Pollution and its impact on health, Adolescent health, Hygiene and Nutrition; Importance of Vision and Significance of Food &amp; Nutrition</li> <li>- Celebration of Food Festival</li> </ul>              |
| Government City College, Nayapul | <ul style="list-style-type: none"> <li>- Blood donation camp</li> <li>- Lecture on Food Adulteration &amp; Food Safety by Dr.Sudarshan Rao, NIN; Health Effects due to Food Adulteration by Dr.Janaki Srinath, Nutritionist, Nutrifit Clinic</li> </ul>                     |
| Dr. BRR GDC, Jadcherla           | <ul style="list-style-type: none"> <li>- Awareness programmes on Tuberculosis by DM&amp;H and District TB Control Officer; Health Issues in Adolescents</li> </ul>  |
| GDC, Parkal                      | <ul style="list-style-type: none"> <li>- Health camp, Hb Analysis test, distribution of folic acid, albendazole, multivitamin and calcium supplements</li> <li>- Awareness programme on psychological, physical health and personal hygiene</li> </ul>                      |
| GDC, Mahabubabad                 | <ul style="list-style-type: none"> <li>- Awareness programme on seasonal illnesses &amp; lifestyle oriented diseases</li> </ul>   |
| GDC, Dharpally                   | <ul style="list-style-type: none"> <li>- Celebration of International Ozone Day, National Food Day</li> <li>- Rally on Superstitious beliefs in Dharpally Village</li> <li>- Health awareness programme &amp; distribution of albendazole tablets</li> </ul>                |
| GDC, Eturnagaram                 | <ul style="list-style-type: none"> <li>- Celebration of World Yoga Day</li> <li>- Awareness programmes on Women Health &amp; Hygiene, communicable diseases, Prevention off Drug Abuse</li> <li>- Health checkup with Royyuru Ph doctors &amp; paramedical staff</li> </ul> |
| GDC, Gajwel                      | <ul style="list-style-type: none"> <li>- Awareness programme on Prevention of Drug Abuse, self defense techniques for girl students by Rudramevi Self Defense Academy expert</li> </ul>   |

As part of Bhagya other significant initiatives undertaken by CCE are as follows -

### Vitamin D Programme

National Institute of Nutrition conducted a Vitamin-D deficiency programme in four colleges: GDC Narayanaguda, BJR GDC, Khairatabad, Indira Priyadarshini GDC, Nampally and GDC, Begumpet. 400 girl students participated in the program. All the participants were provided with individual reports. 45 percent girls were found to be deficient in vitamin D (<10 ng/ml). They were provided with monthly dose of vitamin D sufficient for two months, free-of cost. Only 11 percent girls reported Vitamin D concentration of > 20 ng/ml (which is considered to be sufficient).

### **T-SAT live telecast programmes on Health, Hygiene and Nutrition**

Society for Telangana State Network (SoFTNET) is an initiative from the Department of Information Technology, Electronics and Communications, Government of Telangana to provide quality education through satellite communication. SoFTNET uses GSAT-8 Satellite to telecast T-SAT Nipuna channel. In 2016-2017 T-SAT Nipuna televised a live interactive programme on '*Menstrual Health and Hygiene*' by Dr V Uma Devi from Indian Institute of Health and Family Welfare, Hyderabad. She discussed the nutritional needs of adolescent girls and precautions which need to be taken during menstruation. An interactive programme entitled '*Knowing yourself*' was also aired. This program was conducted by Professor Hima Bindu, Gynecologist, Niloufer hospital, Hyderabad. The presenter interacted with students from different colleges on impact of early marriage on general health & hygiene.

In 2017, an interactive live programme entitled '*Skin and its Importance*' by Dr Padmaja, Dermatologist, Osmania Medical College, Hyderabad was aired. Live programmes on "*Issues of Young Adults*" by Smt. Rajeshwari, Hope Trust Rehabilitation Centre, Hyderabad and "*Health Issues of Women*" by Dr. Sreedevi, Gynaecologist, Government Maternity Hospital, Koti, Hyderabad have been aired.

### **Significant changes in health indicators brought about by Bhagya:**

Health indicators are quantifiable characteristics of a population which a researcher uses to provide evidence for change and to describe the health of a population. Health indicators are used by governments to strengthen their health care policy.

Bhagya attempted to bring about positive changes in certain health indicators of the adolescents. They are as follows:

**Health status indicators:** Bhagya helped create awareness about health and hygiene and encouraged students to take care of their bodies thereby bringing about a significant change in this health indicator.

**Social and Mental indicators:** A significant improvement has been observed in the social and mental indicators as students have been made aware about the fact that health is a holistic concept and hence care should be taken about both physical and psychological state of being.

**Health determinant indicators:** The initiation of programmes like the 'Reproductive Health Care' and 'Menstrual hygiene' has helped bring about positive changes to the health determinant indicator.

### **Future plans of Bhagya**

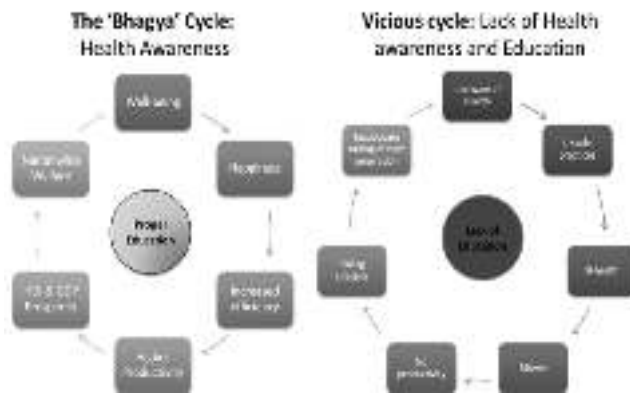
It is proposed to conduct second level of trainings for all Health Coordinators in 2018 on important areas like: Communicable diseases, Oral hygiene, ENT (ear-nose-throat), water borne diseases, food hygiene, waste management, eye and

skin ailments with plausible treatment, information on prevention of Dengue and Malaria. In its second phase Bhagya aims to address all those disease which have bearing on the vital mortality indicators of the state.

**Conclusion**

The Commissionerate of Collegiate Education believes that institutes of higher learning have immense potential to bring about radical changes in the health status of students and community and hence should play a proactive role in public health matters. Further, NAAC and University Grants Commission (UGC) are emphasizing on activities which focus on public health and well-being. The diagram below indicates the transformative potential of Bhagya-

Expected Transformation by ‘Bhagya’



Hence, the CCE proposes further expansion of this innovative initiative on adolescent health within and beyond the GDCs. According to CCE, given the focus of UGC on improving the health of students, Bhagya initiative should be adapted by other states of India too. In the demographic profile of any state, adolescents constitute a significant percentage of the population. Hence, special care and attention should be given to harness their strength and vitality for the good of the country. Thus, Bhagya should become an integral part of the higher education system. This innovative initiative ensures that there is a well informed and trained faculty in degree colleges to guide the students for any health issues. The higher education institutions can also induce changes in health-related behaviour of the community through the Bhagya program. Most of the GDCs in the country are endowed with adequate physical infrastructure such as lecture and seminar halls, auditoriums, audio visual apparatus, public address systems and these features enable government colleges to launch various health related activities.

In 2015, the international community embarked on a new journey of sustainable development with distinct goals and targets. Through Goal 3 (Good Health and

Well-being), they have committed themselves to a global effort to eradicate disease, strengthen treatment and healthcare, and address new and emerging health issues. It calls for innovation to enhance public policy efforts. A holistic approach to better health is required which will ensure universal access to healthcare and make medicines and vaccines affordable. Sustainable Development Goal (SDG) 3 also calls for a renewed focus on mental health issues. For India, to make significant strides in the arena of health and healthcare delivery, innovations are the need of the hour. Bhagya, conceptualized and developed in 2015, is a unique model which will help states of India to respond better to most of the targets of SDG 3.

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## **Reference**

Initiative of Collegiate Education on Health and Hygiene - Commissionerate of Collegiate Education, Telangana, 2016.

Sreerupa Sengupta\* and Sutanuka Dev Roy\*\*

## Data Equality to Gender Equality: Responding to 2030 Agenda

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### Abstract

*To achieve gender equality and women empowerment it is essential to have complete data on the multiple and intersecting ways in which women and girls experience poverty, discrimination and violence. Gender data is crucial: without it, it is extremely difficult to design policies and programs which respond to the differential needs and experiences of all categories of men and women.*

*The Sustainable Development Goals (SDG) has pledged to tackle the gender gap by 2030. The transformative agenda of sustainable development is underpinned by a strong statement of inclusion - 'leave no one behind'. Despite increased attention towards improving gender statistics, in the last two decades, there exists a glaring data gap. This state of affairs presents a real test towards achieving the ambitious scope of Agenda 2030.*

*This paper discusses the significance, achievements and gaps on the gender data front. Further the paper establishes the necessity to develop and budget for newer approaches to bridge the gender data gap by 2030. The paper enumerates an innovative method of data collection from Surguja, Chhattisgarh and highlights ways in which it helped the government to expand its services and effectively respond to the needs of all categories of single women in the state.*

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### INTRODUCTION

Gender equality is fundamental to human development. However, progress for women and girls, remain slow. Even where progress has been made, it has been highly uneven. Even today, women and girls, continue to experience multiple inequalities and intersecting forms of discrimination and violence at every stage of their lives (UN Women, 2017). The Global Gender Gap Report published by World Economic Forum in 2017 stated gender parity is over 200 years away. While

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persistence of gender inequality is disheartening and alarming; the problem is exacerbated by the existence of crucial gender data gaps.

In 2015, 193 governments committed to a 15-year global development framework called the Sustainable Development Goals (SDGs) or 2030 Agenda. Gender equality features as a prominent and cross-cutting theme of 2030 Agenda.

To quote UN Women Report entitled *Turning Promises into Action: Gender Equality in the 2030 Agenda for Sustainable Development* (2017):

The 2030 Agenda makes clear that development will only be sustainable if its benefits accrue equally to both women and men; and women's rights will only become a reality if they are part of broader efforts to protect the planet and ensure that all people can live with respect and dignity (p14).

But the capacity to deliver results depends heavily on data and evidence. According to UN Women although there has been significant improvement on the data front; we are still not in a position to assess status of women and girls across the 17 goals of sustainable development (UN Women, 2017). Thus, the Cape Town Global Action Plan for Sustainable Development Data (2017) United Nations gave a call to all global leaders to strengthen their statistical activities and programs and address the gender data gaps. The report argued that in order to respond to SDG 5 (Achievement of gender equality and women empowerment) and to mainstream gender in all the development goals, it is essential to address data inclusivity and collect data on areas of women's activities, needs and activities which are largely invisible.

This paper addresses the problem by emphasising on the need for innovation in the process of collection and analysis of data - understanding the social norms when collecting and interpreting data so that 'no one is left behind'. The first segment describes the significance of gender statistics, development of gender-responsive indicators; discusses the prevalent data gaps on gender equality and focuses on the major initiatives undertaken, globally, to strengthen availability and quality of data. The second part of the paper describes the Indian scenario, especially data gaps about single women and emphasises on the need for new methodological approach to address the complex area. The paper discusses an innovative index developed by Chhattisgarh to capture the lived realities of single women and consequently bring them within the ambit of government schemes and programs.

### **Gender statistics: An overview**

In all societies there exist discrepancies between what is expected and valued in men and women. These discrepancies, as a consequence, impact men and women through all stages of their lives and determine their access to resources, participation in public domain, decision-making capabilities and their agencies. In other words,

entrenched societal and patriarchal norms create different life world for men and women.

Statistics in general offer a numerical representation of realities and thus provide the foundation for important political decisions. In this light, gender statistics play an important role as it records all sorts of data disaggregated by sex to adequately reflect inequalities or differences between situation of men and women (OECD, 2008). To effectively mainstream gender in policies and programs of the government, globally, gender statistics is essential as they produce data on existing gender differentials, concerns and issues. It is important to mention that a true gender sensitive analysis of statistics should go beyond mere disaggregation of data by sex; rather it should also question the underlying gender relations which are reflected in the data (ibid).

Since 1975 international women conferences has been a driving force for collection of statistics on the status of women. The United Nations Statistics Division (UNSD) initiated a program on gender statistics in the United Nations Decade for Women: Equality, Development and Peace (1976-1985) as a response to the need to assess the situation of men and women for designing gender sensitive policies. UNSD's primary focus was to help countries strengthen their capacities to collect, disseminate and use gender reliable statistics and indicators. The Commission on the Status of Women (CSW), the principle global intergovernmental body dedicated to the promotion of gender equality and women empowerment, also reaffirmed the importance of gender and age-disaggregated data to make visible the full extent of work and contribution of women both in the public and private spheres.

The Fourth World Conference on Women in 1995 adopted the Beijing Declaration and the Beijing Platform for Action (BPfA). BPfA was an agenda for women's empowerment and gave a clarion call to all governments, NGOs and civil society organisations to promote and protect the human rights of women and girls throughout their lives. The Beijing Declaration stated that women must be regarded as both agents and beneficiaries of change. Hence, investing in women's capabilities and enhancing their opportunities to exercise their choices is valuable not only in itself but will positively contribute to economic development and growth. However, the Declaration acknowledged that discriminatory social norms were a major barrier to women's ability to realise her socio-economic rights. In this light the BPfA addressed twelve critical areas of concern which require particular action for the advancement of women.

The BPfA suggested various measures to engender the development model; most significant among them was collection of appropriate data for designing effective policies and programs. Strategic objective (H3) under the 'Institutional Mechanisms for the Advancement of Women' addressed the need to 'generate and disseminate gender disaggregated data and information for planning and evaluation' (BPfA,

United Nations, 1995). The clear focus of BPfA was on the production and development of methods which will help collect data that relate to human rights of women in social, economic, political and cultural domains.

In 1995 the Human Development Report (HDR) published by United Nations Development Program (UNDP) stated that although there have been significant progress in building women's capabilities and closing the gender gaps in those capabilities; a widespread pattern of inequality still persists between men and women in their access to education, health and nutrition and most importantly in their participation in the economic and political spheres (HDR, 1995). In order to map the existing pattern of gender inequalities two new measurements were formulated by HDR- Gender Development Index (GDI) and Gender Empowerment Measure (GEM). While GDI focused on expansion of capabilities of women, GEM on the other, was concerned with the use of those capabilities by women, to take advantage of the opportunities of life.

### **Measuring gender inequality: Global Gender Indices (2000-2015)**

In 2000, 189 countries adopted the Millennium Development Goals (MDGs) as a road map to eradicate poverty and accelerate the process of human development. MDGs addressed equal rights and opportunities of men and women and emphasised on the crucial need to integrate a gender perspective in the implementation of goals of development. Moreover, MDG reiterated that achievement of gender equality depended to a large extent on the collection and analysis of gender-disaggregated data and clearly defined gender-based indicators which highlight whether inequality between sexes have increased or decreased over time.

To develop a better understanding of what is needed to bridge the gap between rhetoric and reality, a series of gender-based indicators were developed between 2000-2015.

Some of the key global gender were: Global Gender Gap Index (GGGI, 2006); Gender Equality Index (GEI, 2010); Gender Inequality Index (GII, 2010), Social Institutions and Gender Index (SIGI, 2010) and Women's Economic Opportunities Index (2010). The Global Gender Gap Index benchmarked countries on their progress towards gender parity in four thematic dimensions: economic participation and opportunity, educational attainment, health and survival and political empowerment (World Economic Forum, 2006). GEI replaced GDI and GEM (developed in 1995) and addressed reproductive health, empowerment and labour force participation. The Gender Inequality Index measured inequality along three aspects of human development - reproductive health (measured by mortality ratio and adolescent birth rate); empowerment (measured by number of parliamentary seats occupied by women and secondary education of men and women) and economic status (measured by labour force participation of men and women) (UNDP, 2010). Each gender-specific indicator tried to capture two aspects: the extent to which gender



disparity was being reduced on crucial aspects of human development (achievements of goals and targets) and the means (policies) needed to achieve gender equality.

In this light, the Social Institutions and Gender Index (SIGI) developed by OECD merits special mention. The index is unique as it went beyond the three core focus of human development- health, education and employment and addressed social norms, customs, and attitudes which can be a determinant of or constraint towards the bargaining power of women in private and public spaces.

Studies across the globe have shown that gender equality refers to accumulation of endowments (education, health and physical assets), use of those endowments to undertake economic opportunities and finally the application of those endowments to take actions or enhance agency which impact both individual and the household (World Bank Report, 2012; Sen, 1999; Kabeer, 1996). It is in this light SIGI, tried to measure both equality of opportunities and equality of outcomes between men and women. Under SIGI, countries were motivated to collect data on categories such as: legal age of marriage of women, incidence of early marriage, parental authority in marriage of women, inheritance rights of daughters, reproductive autonomy, fertility preferences, attitude towards violence against women, access to assets, financial services and public spaces (SIGI, 2010).

Gender equality matters for development. Thus, between 2000-2015, innovations were made towards collection of gender data in various countries and a sincere effort was made to highlight the needs of all categories of men and women and measure how far countries have been instrumental in reducing the gaps in well-being between men and women.

### **Gender data gaps**

Undoubtedly, international agreements, Millennium Development Goals gave a push to all countries to collect data on all aspects of human development and in particular on gender statistics at the national level. Globally, approximately 80 percent of countries produced sex segregated data on mortality, labour force participation, education and training (Buvinic, Nichols et al, 2014). Despite all these developments challenges remained. These included- absence of internationally agreed upon standards of data collection, uneven availability of gender statistics across countries over time and gender data gaps. Internationally, 28 gender data gaps were mapped across domains of health, education, economic opportunities, political participation and human security (Data2x, 2014).

The final country report of India on Millennium Development Goal (2015) highlighted the need for new approaches to survey data collection along with expansion of data sources (usage of mobile phones and global positioning system data) to identify more vulnerable groups of women (for example: single women) whose lived realities have not been adequately covered by the existing mechanisms of data collection.

Another major issue was the quality of the data collected on different aspects of lives of women and men. The country report stated there was absence of consistent standards of data collection and this significantly impacts the formulation of policies for gender equality.

The report emphasised the need to document how outcomes for women and girls vary across various social variables (for example: age, ethnicity, income, income, ownership, technology) and also collect individual level data at the household level to understand how intra-household dynamics affect the outcomes for women and girls.

Thus, in 2015, the sustainable development framework emphasised upon identification of groups which have been left behind and systematic collection of gender-specific data, ensuring quality and comparability.

### **Sustainable Development Goals: New Data Revolution**

Several new gender-specific big data projects were launched in 2015 to foster a more gender-responsive data revolution for sustainable development (Gender Equality and Big Data, 2016). In 2014 the data2x platform was created with support from Bill and Melinda Gates Foundation and William and Flora Hewlett Foundation to improve quality, availability and use of gender data to bring about changes in the lives of women and girls, globally. Data2x works in collaboration with UN agencies, governments, civil society to close gender data gaps. The World Bank relaunched its gender data portal in 2016. It also published the Little Data Book on Gender in 2016. Another big data project which merits mention is the Evidence and Data for Gender Equality Project (EDGE). EDGE is a joint initiative of United Nations Statistics Division and UN Women and seeks to accelerate the process of production of newer gender responsive data on health, education, asset ownership, employment, entrepreneurship; among other areas.

In 2016, Melinda Gates in a conference in Copenhagen announced that Bill and Melinda Gates Foundation (BMGF) will commit \$80 million over the next three years to close the gender data gap. Since 2016, BMGF has facilitated countries to collect data which reflect the various facets of lives of women and that provides policy makers the raw materials for designing more gender sensitive policies.

The gender data revolution ushered in by the targets of sustainable development (53 out of 230 SDG indicators address gender implicitly or explicitly) made it clear that while traditional data sources are important; they are not enough to shed light on all the experiences of women and girls. To bridge the gender data gaps by 2030 innovative approaches (in combination with traditional data resources) and new gender responsive indices are required to develop a holistic understanding of the social norms and political realities which shroud gender equality.

Since 2015, India has also attempted to go beyond traditional methods of collection of data and develop effective ways to acquire, analyse and use data (understand the social dimensions of big data) with an aim to reduce the gender data gap and ensure quality and comparability among data sets. The National Institution for Transforming India (NITI Aayog) has acknowledged that need for high quality, up-to-date and reliable data to achieve sustainable development; especially to transform the lives of women and girls (NITI Aayog, 2018).

NITI Aayog in collaboration with the Ministry of Statistics and Programme Implementation has mapped out SDG and related targets and outcome indicators for Central Ministries, centrally sponsored schemes and other government initiatives. Further, the institution has designed an index to rank states on their performance on SDG.

The unavailability of complete data in the sphere of gender in India to a large extent follows the trend of global gender data gap (discussed earlier). This paper will address the data gap about one of the most vulnerable and socially disadvantaged groups of in India - the single women. The lack of adequate data on single women has led to their marginalisation and discrimination and gradual exclusion from social sector programmes.

The next section will discuss the case of single women in India, the issue of data unavailability and the innovative index developed by the state of Chhattisgarh to respond to this gender data gap.

### **Single women, data gap & innovation: Case Study of Surguja**

Kanchan Gandhi, Harsh Mander et al in their article 'Living Single: Being a Single Women in India' (2016) argued that the category of single is slippery. According to them, the category of single is porous and heterogeneous. Further within each category of single women there exists diversity depending on their caste, class or socioeconomic and political dynamics of the given region.

According to census 2001, 7.4 per cent of the female population of India was 'single'. There were 3,43,89,729 widows and 23,42,930 divorced/separated women – a total of 3,67,32,659 single women. The data from census 2011 indicated that there has been a significant increase in the percentage of single women living in India. According to census report, in comparison to 51.2 million in 2001, there were 71.4 million single women in 2011; signifying an increase of 39 percent (Census, 2011).

The National Forum for Single Women's Rights categorised single women under four heads - a) deserted, b) widow, c) separated and d) never-married. In 2011 the National Forum conducted a study on the status of low income single women in India. The study highlighted varied reasons which underpin the identity of single women. The study also brought to fore the marginalisation, discrimination and

multiple forms of violence faced by single women by virtue of their gender and status.

The vulnerability and human rights violations faced by single women were first acknowledged in the 11<sup>th</sup> Five Year Plan (2007-2012); however the focus was primarily on deserted women, separated women and widows. 12<sup>th</sup> Plan document (2012-2017) acknowledged that there are many single women who have remained single by choice. The 12<sup>th</sup> Five Year Plan aimed to create a separate space for single women, promote and protect their rights instead of clubbing them under the category of family.<sup>1</sup> The section on 'emerging issues' in the draft National Policy on Women 2016 also discusses the necessity of addressing the lived experiences of single women and providing social security benefits to widows, separated, never-married, divorced and deserted.

Despite recognition of single women as a vulnerable social group, there is incomplete data on the various aspects of vulnerability of single women. In addition, there is lack of data on the progress made by states to reach out to single women and address their concerns. This lack of complete data about the needs and concerns of single women have rendered them invisible to the society and the State and have excluded them for the safety net of social protection, health, food and nutrition. Unless progress is made on the abundance, quality and approach to collection of data on single women; their plight will never be adequately addressed. It was this sense of urgency that led the office of the district collector of Surguja in Chhattisgarh to design a unique method to capture data on the vulnerability of single women of the state and accordingly plan interventions for them.

### **Single Women of Surguja, Chhattisgarh**

As per Census 2011, there are 27 million Female Headed Households (FHHs) in India. In other words, 10.9 percent of the households in the country are headed by females. In addition, the census data shows 49 lakhs (18.3 %) households are single member female households. Chhattisgarh has the highest percentage of single member female households followed by Madhya Pradesh, Tamil Nadu, Andhra Pradesh, and Maharashtra among others.

The highest number of female headed households (hereafter FHHs) in Chhattisgarh is of grave concern for the state. A range of factors such as absence of men from the house, women being widowed, divorced and single contribute towards the existence of the FHHs, especially single women headed households. The single women lead a precarious life and are subjected to humiliation, isolation, and marginalisation from the communities. In most cases they are denied access to basic rights and services. The district administration observed that in rural areas

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<sup>1</sup> [http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp\\_vol1.pdf](http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol1.pdf)

single women (unmarried, widowed, divorced, separated) suffered most from acute poverty. The table below describes the social condition of FHHs in rural Surguja in comparison to FHHs in rural Chhattisgarh.

#### Situation of FHHs

| S No. | Parameters   | Chhattisgarh (Rural)           |                     | Surguja (Rural)           |                     |
|-------|--|--------------------------------|---------------------|---------------------------|---------------------|
|       |  | N                              | %                   | N                         | %                   |
| 1     | Total number of FHH  | 4,74,218                       | 100                 | 37,328                    | 100                 |
| 2     | FHH by predominant materials of roofAnd walls <ul style="list-style-type: none"> <li>• Walls made of grass/thatch/ bamboo, plastic/polythene, mud/unburnt brick and wood</li> <li>• Roofs made of grass/thatch/ bamboo, plastic/polythene, and hand -made tiles</li> </ul> | 3,72841                        | 78.6                | 36,005                    | 96.4                |
| 3     | FHH by pre dominant material of floor(mud, wood/bamboo, burnt brick, and stone)  | 4,42,787                       | 93.3                | 36,413                    | 97.5                |
| 4     | FHH by ownership status of houses <ul style="list-style-type: none"> <li>i. Owned</li> <li>ii. Rented</li> </ul>   | 4,43,690<br>7,914              | 93.5<br>1.6         | 35,732<br>589             | 95.7<br>1.5         |
| 5     | FHH by size of HHs <ul style="list-style-type: none"> <li>i. 1-4</li> <li>ii. Morethan 4</li> </ul>  | 3,66,079<br>1,08,139           | 77.1<br>22.8        | 29,292<br>8,046           | 78.4<br>21.5        |
| 6     | FHH by number of dwelling rooms <ul style="list-style-type: none"> <li>i. No exclusive room</li> <li>ii. One room</li> <li>iii. More than one room</li> </ul>  | 13,925<br>2,24,332<br>2,35,961 | 2.9<br>47.3<br>49.7 | 1,093<br>16,885<br>19,350 | 2.9<br>45.2<br>51.8 |
| 7     | FHH by type of fuel used for cooking(firewood, crop residue, cow dung cake, coal and charcoal)   | 4,66,256                       | 98.3                | 36,822                    | 98.6                |
| 8     | FHH by availability of Individual Household Latrines(IHHL)   | 59,837                         | 12.6                | 7,140                     | 19.1                |
| 9     | FHH availing banking services  | 1,77,391                       | 37.4                | 18,618                    | 49.8                |
| 10    | FHH having permanent housing structure   | 81,765                         | 17.2                | 1,042                     | 2.7                 |

As table above indicates the quality of living of FHHs in rural Surguja is truly in a dismal state in comparison to FHHs in Chhattisgarh. The FHHs in rural Surguja lack permanent housing structure and are heavily dependent on fire wood, cow dung, coal for fuel.

Given the plight of the rural women in Surguja, the district administration decided to undertake positive measures to improve their lives. The major bottleneck in developing intervention for FHHs, especially single women was lack of comprehensive data to track such women. This lack of data resulted in the marginalisation of single women from government interventions in the district.

The district administration acknowledged implementation of strategies to bring about changes in lives of rural women, especially single women is incumbent on complete dataset on this category of women which was currently absent in the district.

### **Transforming Lives: Creating Enabling Environment For Single Women**

After several rounds of deliberations with district, block and panchayat level officials and meetings with peoples' representatives a district level intervention was initiated for the upliftment of FHH with particular focus on single women. A multi-pronged, inter-departmental and inter-sectoral strategy was conceptualised to effectively address issues related to poverty, illiteracy, sanitation, health and alcoholism. The district administration launched a time bound initiative known as *Suposhit Shikshit Samridhhi Surguja Abhiyan* (healthy, literate and prosperous Surguja initiative) in April 2014.

The objectives of the intervention was reduction of poverty by: a) strengthening the network of Self-help Groups (SHGs); b) developing a robust plan for livelihood for each SHG; c) convergence of existing government schemes d) ensuring food and social security; e) financial inclusion; f) providing legal assistance and g) building institutions at village level to ensure sustainability of the initiative. The initiative addressed concerns of widowed, divorced and deserted women of the district (belonging to the age group of 18-60 years) and tried to bring them under the fold of government intervention.

In order to address the concerns of single women of Surguja, *Suposhit Shikshit Samridhhi Surguja Abhiyan* adopted the following approach- a) conducted situational analysis to understand the socio-economic situation of rural women, b) provided facilitation, assistance and handholding support to such women by associating them with income generation, and c) quantify vulnerability of single women by designing the 'Women Vulnerability Index'.

The intervention was carried out in all the seven blocks of Surguja - Ambikapur, Lakhanpur, Udaipur, Lundra, Batauli, Sitapur and Mainpat.

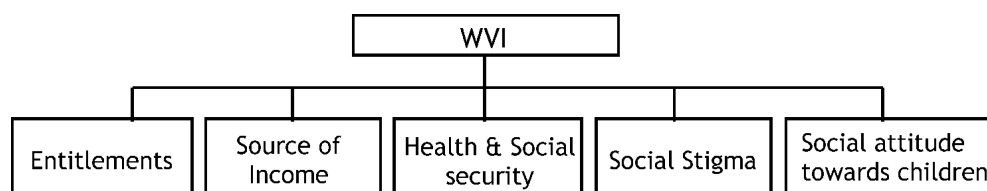
To develop a comprehensive understanding of the vulnerability of single women (widowed, divorced and separated) the department carried out survey in 352 gram panchayats of *Surguja*. A total of 8998 responses were recorded as part of the survey. The responses elicited through the field survey was utilised to develop a unique index which is an innovative aspect of this intervention.

### Women Vulnerability Index: An Innovation

The district administration of Surguja designed an index to quantify the vulnerability faced by single women living in the area. This initiative was the first of its kind in India as well as in the state of Chhattisgarh. The aim of the index was to provide a comprehensive understanding on two aspects: a) key dimensions of vulnerability of all categories of single women, and b) degree of vulnerability of single women on the identified dimensions. While economic inequality between men and women increases vulnerability of women; inability to exercise choice, freedom, control over one's body; lack of access to basic resources, mobility and decision-making capacities are other crucial factors which make women vulnerable in the society (Kabeer, 2012; Banu, 2016). Thus, vulnerability of women is a multi-faceted phenomenon.

Prior to designing the index, the district administration conducted a survey among female headed households, especially single women. The responses from the survey highlighted the various dimensions of vulnerability of single women which covered the spectrum of material, human and social resources: financial literacy, social security, food security, health and sanitation, skill development, violence and attitude towards children.

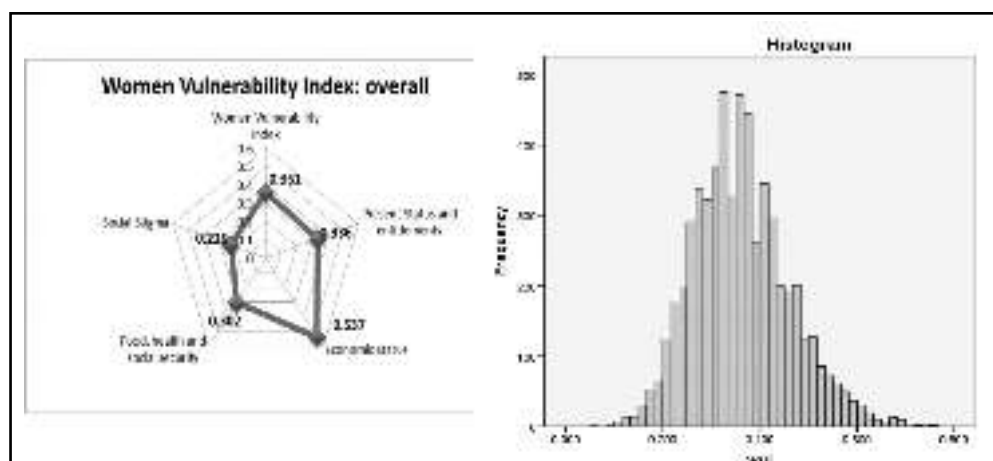
It is in this light that the index covered five broad dimensions of women vulnerability:



Equal Weighting (EW) technique based on the total score of each dimension was employed. The table below illustrates the dimension wise break up of Women Vulnerability Index (WVI)<sup>2</sup>.

<sup>2</sup>Mathematically, Women Vulnerability Index (WVI) = Sum of scores of (entitlements) + (economic status) + (Food, health and social security) + (social stigma) / (Sum of Maximum marks from all parameters). Range of WVI will be between 0-1 and higher the score indicates higher vulnerability.

| S. No. | Dimension                        | Total number of Parameters/Indicators | Total Score | Weights Assigned to dimension |
|--------|----------------------------------|---------------------------------------|-------------|-------------------------------|
| 1      | Present status and entitlements  | 7                                     | 28          | 1.0                           |
| 2      | Economic status                  | 8                                     | 24          | 1.0                           |
| 3      | Food, health and Social security | 7                                     | 25          | 1.0                           |
| 4      | Social Stigma                    | 7                                     | 23          | 1.0                           |
|        | Total                            | 29                                    | 100         | 5.0                           |



As per the calculations of the Women Vulnerability Index (WVI), the overall vulnerability of single women in Surguja stood at 0.361. However there are wide variations between various dimensions. The index highlighted that widowed, divorced and separated women are most vulnerable along the dimensions of entitlements, food, health and social security and social stigma.

### Discussion and Conclusion

The conceptualisation and implementation of the Women Vulnerability Index was a commendable feat by the district administration of Surguja. The vulnerability index covered the essential dimensions of vulnerability of single women (widowed, deserted, separated and never married) and for the first time provided a new methodological approach to the state government to collect complete data about single women and accordingly plan programs for them.

The women vulnerability index helped district officials of Surguja understand the degree of vulnerability of single women in the region. This innovative approach to data collection on single women led to the following major outcomes:



First, 37% of single women were brought under the fold of security schemes. The Department of Social Welfare proposed to provide pension to these women under the Indira Gandhi Widow National Pension Scheme.

Secondly, the Department of Food took proactive measures to provide ration cards as well as LPG cylinders (under *Swachh Indhan Yojana*) to single women residing in Surguja.

Thirdly, the Zilla Panchayat assured that all single women will be provided *pucca* houses under *Indira Awas Yojana*. In addition budgetary provisions were made as part of the *Swachh Bharat* Mission to provide toilets to FHHs; thereby ensuring a life of dignity and free from violence.

Fourthly, the adult literacy centres of the region gave special attention to single women to develop their literacy skills.

Fifthly, the data on health status of single women helped the department of health and family welfare to design special health packages for the marginalised categories of women and issues health cards (under *Mukhya Mantri Swasthya Bima Yojana*) to them.

The most important contribution of the women vulnerability index was provision of comprehensive data about single women. As a consequence there was up gradation of land records and creation of employment opportunities under Mahatma Gandhi National Rural Employment Guarantee Act. The departments of agriculture, horticulture and veterinary provided jobs to the single women of Surguja.

The marginalised status of single women has a debilitating effect on the lives of their children. The children are subjected to humiliation, neglect and deprivation every day. Hence, the district administration in collaboration with Department of Tribal Welfare and Education ensured quality education, nutrition and safety of these children.

The development of Women Vulnerability Index was a bold step by the district administration of Surguja. It transformed the lives of single women and provided the much needed evidence for action. The index helped the government identify the women who are hit hardest by poverty and other forms of inequalities as well as map the trend of gender inequality in the region. In addition the WVI ensured convergence between various line departments of Surguja as well as between government schemes and programmes (national and state).

The good governance initiative of Surguja clearly shows methodological innovation is the need of the hour to fulfil gender data gaps. It also established the political commitment and financial resources needed for resolving the data gap. The lived experiences of women and girls are heterogeneous and their inequalities intersect with other forms of inequality (including caste, race, ethnicity, religion, location

and so on). Hence, to successfully respond to the goals of gender equality by 2030, India needs to develop innovative ways to collect data as well as replicate such good governance initiatives across the country so that: every woman is counted, no one is left behind.

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