

Gender Neutrality at Entry Level Job in the Indian ICT Industry

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Abstract

The surfacing of Information Technology sector in mid-1990s has disclosed a potential employment opportunity for women in this organized sector pleasantly be suitable their job environment and offering, in principle, least gender discrimination. This paper attempts to analyze the issues of opportunities and constraints the women employees face in the ICT sector in India. IT sector, through its initial job employment, contributes significantly to women empowerment. Its employment potentiality provides inspiration to female students to take up technical and professional courses with an eye to the ICT sector. I have explored gender neutrality at the initial job level in ICT sector with the help of unstructured questionnaire. I have used X^2 test for the Neutrality. The theoretical aspect of individualization in the workplace is flagrant but at the societal level, patriarchal strategies dominate on the Indian mind. The reflection of this paper is arrived at, on the basis of, the inputs drawn from different literatures of ICT sector such as NASSCOM.

Key Words: Gender, Neutrality, Initial Job, Software Sector and ICT.

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1. INTRODUCTION

1.1 Gender: It refers to the social differences and relations between men and women which are learned, vary widely among societies and cultures, and change over time. The term gender does not replace the term sex, which refers exclusively to biological differences between men and women. For example, statistical data are broken down by sex. The term gender is used to analyse the roles, responsibilities, constraints, opportunities and needs of women and men in all areas and in any given social context. Gender roles are learned behaviours in a given society, community or other social group. They condition activities, tasks and responsibilities are perceived as male or female. Gender roles are affected by age, class, race, ethnicity and religion, and by the geographical, economic and political environment.

1.2 Gender Neutrality: Neutrality between men and women entails the concept that all human beings, both men and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles and prejudices. Gender neutrality means that the different behaviour, aspirations and needs of women and men are considered, valued and favoured equally. It does not mean that women and men have to become the same, but that their rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender neutrality means fairness of treatment for women and men, according to their respective needs. This may include equal treatment or treatment that is different but which is considered equivalent in terms of rights, benefits, obligations and opportunities.

1.3 Indian Information and Communication Technology and Employment

Indian Information and Communication Technology industry accounted for about 12% of the country's GDP and export earnings in 2015-16. In 2015-16 annual revenue from IT-BPO sector is estimated to have grown over US\$276 billion. Indian IT industry has 450 delivery centers in 90 countries worldwide, which is an unparalleled global value chain. The computers and IT materials which were basically invented and designed to solve numerical problems are facilitating the transition to a global society by encompassing all walks of our life IT allows leapfrogging which can help countries skip generations of technology and stages of growth and place them directly in a service-dominated economy. That's why even without having a fully matured manufacturing sector, India is experiencing shift in its economy due to its service sector development which is dominated by IT. And now due to IT industry's contribution, there is the emergence of 'New Economy'. Despite the recent economic slowdown, India's IT-BPO sector displayed resilience to grow by 5.5 per cent. India continues to take centre stage with 51% of total outsourcing market.

The industry had a significant impact on the Indian economy with 45% of incremental export during 2011-15; providing employment to nearly 12 million people in ancillary industries; and spreading up the industry to the tier 2 and 3 cities. Many considered this as a 'demographic dividend' for India. It is estimated that India has over 4 million technical workers, over 2,282 educational institutions and polytechnics, which train more than 325000 computer software professionals every year. The enormous base of skilled manpower is a major draw for global customers. India provides IT services at one-tenth the price (NASSCOM, 2016).

In the initial stages of IT revolution or computerization there was a fear of increased 'unemployment' and 'workers redundancy' but afterwards the same IT industry became a great employer. "If the sectors of agriculture, knowledge and information industries are encouraged to grow in a consistent manner then the problems of poverty, unemployment can be solved". And IT industry has turned out to be an aspiring industry for the young generation. IT industry with its different emerging branches employed both highly skilled youth in hardware and software sectors and people with less technical and formal education in ITES-BPO industry. Hence it has created employment opportunities for both highly skilled and formally graduated. Software industry has provided opportunities for expanding the local base of entrepreneurship. Further the industry not only helped to reduce the extent of the brain drain by creating rewarding employment opportunities within the country but also prompted a number of non-resident Indians to return to start software ventures.

With respect to employment, in the year 2015, IT-BPO employed 2,700,000 directly. Out of which 1250000 were employed in IT services, 950000 in BPO and 500000 in domestic market segment. Further for the year 2018 the estimated total direct employment is of 3,250,000 out of which 1400000 in IT, 1100000 in BPO and 750000 in domestic market (NASSCOM 2009).

The remarkable changes in urban lifestyle and landscape it has fostered are responsible for its tremendous visibility, nationally and globally. IT employment has changed all the traditional employment patterns and conditions. Regarding the quality of the IT employment, 'high stress' is highlighted as prime negative feature. Corporate HR practices are under concern for creating inexperienced workforce in the industry. There have also been raising concerns on violation of laws by corporate and harassment.

As software sector creating plenty of employment opportunities, the gender neutrality of these opportunities needs to be tested whether these opportunities are equally accessible to both male and female. Intention of the present paper is to study the 'gender neutrality' of software employment opportunities at entry level.

Entering to any profession depends upon four important factors (Mitter 1997). Firstly, interest of an individual in the profession, second, educational factors, third, organizational factors and finally, socio-economic background. Personal interest in the profession is the basic influencing factor which makes an individual to move in the direction to fulfill aspirations. Along with interest, necessary skills are to be attained through proper education. Further organizational policies must be in tune with the easy accessibility to the job without any inherent bias. Further in India which has a deep-rooted traditional and cultural base socio-economic background becomes one of the important influencing factors for the accessibility of job and required education. Present paper tries to comparatively analyze the above said four factors in the direction of assessing the equal accessibility to enter the software sector for both male and female.

2. REVIEW OF LITERATURE

- **Cognizant Report (2018)** cleared that a diverse workforce drives Cognizant's exceptional client service and industry-leading growth, fostering an environment that promotes women to leadership roles to bridge the gender pay gap. Greater diversity and inclusion is crucial for fostering a strong culture and building highly effective teams. Cognizant will continue to grow awareness and momentum for a more diverse and inclusive environment through

focused programmes in the UK&I. The under-representation of women in the science, technology, engineering and mathematics (STEM) fields is an industry-wide issue. In the U.K., the data show that only 25% of graduates in STEM subjects are women; in engineering and technology, this data is just 14% and in computer science, it is 16%. We confirm the gender pay gap data contained in this paper for Cognizant Worldwide Limited is accurate and has been produced in accordance with the guidance on gender pay gap developed by ACAS, and calculated according to the requirements of The Equality Act 2010 (Gender Pay Gap Information) Regulations 2017.

- **Kathleen Sexsmith, et al. (2017)** cleared that women and men have not benefited equally from the increased trade of agricultural commodities and the rise of foreign investment in agriculture. Gender inequalities in agriculture persist in the 21st century, and tend to be exacerbated by trade and foreign investment. Two broad agendas have emerged in response to global calls for more sustainable trade and more responsible investment in agriculture. The first, largely targeted at the private sector, are represented by the array of Voluntary Sustainability Standards (VSS), such as fair trade labels. The second, largely targeted at governments, are the multitude of guidelines on responsible investment in agriculture, such as the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGTs). In this policy brief, they explored how global standards and guidelines contribute to gender equality and women's empowerment, and whether more can be done through these instruments to improve the situation of women in agriculture.
- **United Nations Conference on Trade and Development (2017)**, explored different ways in which some countries are addressing gender-related issues in free trade agreements, and the commitments made by some other countries and regional groups to make trade and gender chapters a regular feature of future free trade agreements, may have implications for the eleventh Ministerial Conference. A joint declaration on trade and women's economic empowerment paved the way for more in-depth discussions in future, and would help to realign perceptions of gender neutrality in trade policy.
- **Welp, Brosi and Schwarzmüller (2015)**, analysed the implementation of Directive 2006/54/EC with a focus on job evaluation / classification. Applying research on gender stereotypes, it analysed 1) the current description of gender-neutral job evaluation / classification, 2) the application of gender-neutral job evaluation / classification for increasing female access to employment, decreasing the gender pay gap and improving occupational social security schemes, and 3) current actions of Member States, social partners, and equality bodies in promoting gender-neutral job evaluation / classification. Based on these analyses, recommendations on the enforcement of the Directive and the promotion of gender-neutral job evaluation and classification are provided.
- **Elisabeth K. Kelan, (2009)**, investigates that gender discrimination remains a feature of working life in many contexts, research on gender in organizations has shown that workplaces are often constructed as gender neutral. This poses an ideological dilemma for workers: how can they make sense of gender discrimination at work while presenting their workplace as gender neutral? This paper explores that dilemma through an analysis of how information communication technology (ICT) workers talk about gender discrimination.

Instead of denying gender discrimination, workers acknowledge it can happen but construct it as singular events that happened in the past and they place the onus on women to overcome such obstacles. Navigating the ideological dilemma around gender neutrality and discrimination, interviewees display what the article characterizes as gender fatigue.

- **Tristin K. Green (2003)**, recognised that there is simply no single solution that can be applied by all employers to eradicate the often self-perpetuating power differential that results in the subtle exclusion of women and minorities in the modern workplace, a structural account of disparate treatment theory would provide the necessary conceptual and legal foundation for the type of ongoing conversation, information gathering, and problem solving crucial to the antidiscrimination project of today.
- **Bina Agarwal (1994)** focused on a much neglected issue: the link between gender inequalities and command over property. She outlined why in rural South Asia, where arable land is the most important form of property, any significant improvement in women's economic and social situation is crucially tied to them having independent land rights. Better employment opportunities can complement but not substitute for land. But progressive legislation few South Asian women owned land; even fewer effectively control any land Why? A complex range of factors – social, administrative and ideological – were found to underline the persistent gap between women's legal rights and their actual ownership of land and between ownership and control. The necessity of collective action by women for overcoming these obstacles and the aspects needing a specific focus for policy and action were also discussed.

3. OBJECTIVES OF THE STUDY

Objective of the study is to verify whether Indian software sector employment is gender neutral and female friendly. This gender neutrality has been studied at initial stage viz. 'entering to the job'. Additionally the problem of attrition is also dealt with gender base to analyze female employee's stability in the sector. The objectives are as under:

- a. To analyze the gender bias and female friendliness of the entry conditions to the software job.
- b. Analysis of the female stability considering the problem of attrition based on gender.

4. HYPOTHESIS OF THE STUDY

Prime hypothesis of the study is that "Entry conditions to the Indian software sector are gender neutral".

5. RESEARCH METHODOLOGY

The study is based on both primary and secondary data. Primary data has been collected through structured questionnaires canvassed to the software employees at Noida Electronic City and IT Park and Gurugram Cyber Hub during the year 2016-17. However, participation approach and unstructured interview method also was adopted. Through participation in the NASSCOM's "Diversity and Inclusivity Summit" for the year 2015 and 2016 observations were made. During that summit unstructured interviews were conducted with software employees and HR managers of software companies.

Secondary data is collected from Dataquest, Economic and Political Weekly, Indian Journal of Labour of Economics and various journals, Reports of NASSCOM, books, websites and News Papers etc.

6. DATA ANALYSIS AND INTERPRETATION

6.1 Profile of the Respondents

General findings regarding the socio-economic background, educational background, age, service, pattern of employment and reasons for taking up software job are as follows;

6.2 Socio-economic Background

Most of the employees resist revealing their socio-economical background. According to them IT industry is purely 'meritocratic industry' and any issue relating to religion, caste, parental education and occupation is irrelevant. IT industry while employing, along with their educational and technical competence considers some of the social attributes which are influenced by the candidates of socio-economic background.

6.3 Educational Background

As Table 1 reveals 76% of the male and female employees had technical qualification, 7.5% professional and 16.5% had 'other' qualifications including general graduation and post graduation.

Table 1: Educational background of the respondents

Qualification	Male	Female	Total
I. Technical: B.E, B. Tech, M.E, M. Tech., MCA, PGDCA, BCA, BCS, Dip	57 (80.28%)	95 (73.64%)	152 (76%)
II. Professional: B.F.A., BBA, MBA, BBM	5 (7.04%)	10 (7.75%)	15 (7.5%)
III. Others: B.A., B.Com., B.Sc., M.Com., M.Sc., M.A., P.U.	9 (12.68%)	24 (18.60%)	33 (16.5%)
Total	71	129	200

(Source: Field Survey) (Note: Tables in the parenthesis are the averages)

There is no considerable gender-based difference in the educational profile of the respondents. Female education profile indicates that women opt for different disciplines compared to men.

6.4 Age Profile

About 41.90% female respondents were in the age bracket of up to 25 years, 51.20% were in the range of 26-30 years. 5.40% were in the range of 31-35 years and only 1.60% above 35 years. Respective proportion of male respondents in these age groups is, 32.40%, 49.30%, 16.90% and 1.40%. Mean age of female employees is 26.33 years which is comparatively little bit lower than male mean age i.e. 27.75 years.

Table 2: Age profile of the employees

Age	Male	Female	Total
Upto 25	23 (32.40%)	54 (41.90%)	77 (38.50%)
26 - 30	35 (49.30%)	66 (51.10%)	101 (50.50%)
31 - 35	12 (16.90%)	7 (5.40%)	19 (9.50%)
35 & Above	1 (1.40%)	2 (1.60%)	3 (1.50%)
Total	71	129	200

Source: Field Survey

As Table 2 indicates, number of female employees, comparatively more in the first and second age group i.e. upto 25 years and between 26 to 30 years. Above 30 years male proportion is considerably more than female proportion. Around 90% of the female employees are below the age of 30. This phenomenon represents two contradictory pictures. One indicates the comparatively late entry of female to the sector and another indicates the present increasing trend of female employees in the software occupations. In India software sector yet has to reach maturity stage hence as the industry itself was in its nascent stage, before the year 2000 proportion of women was only 20% of the overall IT work force according to NASSCOM reports.

6.5 Service Profile

Among female respondents 31.8% had less than 2 years of experience, 48.1% service is between 2-5 years, 19.4% service is in the group of 5-10 years and 0.8% had the service experience of more than 10 years. Whereas respective proportion of male in these service groups is 32.4%, 35.2%, 26.8% and 5.6%. Average service of female is lesser than male i.e. 3.57 years compared to 4.79 years.

As per Table 3, upto 5 years of service proportion of female is greater than male. Beyond 5 years male domination is witnessed.

Table-3: Gender Proportion among Service Groups

Service Tenure	Male	Female	Total
Upto 2 years	23 (32.40%)	41 (31.80%)	64 (32.00%)
2-5 years	25 (35.20%)	62 (48.10%)	87 (43.50%)
5-10 years	19 (26.80%)	25 (19.40%)	44 (22.00%)
Above 10 years	4 (5.60%)	1 (0.80%)	5 (2.50%)
Total	71	129	200

Source: Field Survey

Again Table 3 supports late entry of female compared to male to the software sector. Since last 5 years proportion of women is increasing which is a positive development.

6.6 Pattern of Employment

Generally software sector reminds only software engineers but within software sector there are many technical and non-technical positions with their own different hierarchy and positions and functions. Mitter (2003) and Neetha (2009) argued that in IT industry women are concentrated at lower rungs and in non-technical positions. NASSCOM Reports too supported this.

Table 4: Gender Proportion among Service Groups

Position of Job	Male	Female	Total
Technical	62 (87.30%)	100 (77.50%)	162 (81.00%)
Non-Technical	9 (12.70%)	29 (22.50%)	38 (19.00%)
Total	71	129	200

Source: Field Survey

NASSCOM report finds concentration of women at entry level and slowly their proportion is increasing in middle management but at top level growth is static.

NASSCOM considered employees with less than 5 years of service as entry level employees. To observe the perception of the employees about their hierarchical status, information regarding their level was collected. And in present analysis for female 3.1% at top level, 77.5% at middle

level and 19.4% were at lower level positions. Respective proportion of male at various levels is, 2.8%, 74.6% and 22.5%.

As Table 5 indicates majority of both male and female employees are concentrated at middle level. And number of female finding themselves at top positions is relatively greater than male employees.

Table 5: Proportion of male and female employees at different levels

Job Level	Male	Female	Total
Top	2 (2.80%)	4 (3.10%)	6 (3.00%)
Middle	53 (74.60%)	100 (77.50%)	153 (76.50%)
Low	16 (22.50%)	25 (19.40%)	41 (20.50%)
Total	71	129	200

Source: Field Survey

Respondents' perception indicates that they are viewing their positions as superior positions and deriving satisfaction. But as Pande (2006) explains IT companies for the psychological satisfaction of the employees maintain different grades, positions and promotion levels which in reality may not carry any increased authority. Hence, it can be argued that companies are successful in creating 'illusive' upward movement in the minds of the employees. In reality none of the either male or female respondents was in top level management because top level management includes board members and above managerial level personnel. But in present study those who viewed themselves as top level employees were the team leads and associate HR managers. And one of the female employees directly opines that her higher position is without any authority.

6.7 Gender based analysis of the factors influencing entry to the sector

There are several factors that influence the entry of female to the industry. Those determining factors can be classified as personal, socio-economical, educational and organizational factors. And following are the findings of the present study about the existing difference on the level of influence of these factors for male and female and women-friendliness of those factors;

6.8 Personal Factor

Personal interest and ability basically influence an individual's career choice. But ability further depends upon the educational and socio-economic factors hence at personal level study compared only the personal interest of both male and female employees in the software profession. Because in Indian society unlike several traditional societies job/profession of female will be decided by family rather her own interest. Some of the studies conducted at Europe and U.S.A. found lack of interest among female themselves in engineering professions and education. In Indian context whether such lack of interest exists among female employees, to assess their interest respondents were asked about the decision making person about their profession. Table 6 clearly reveals that majority of the female respondents did opt for the software job with their own intention

Table 6: Decision of Entering the Profession

Decision to enter in the profession	Male	Female	Total
Yes	54 (76.10%)	101 (78.30%)	155 (77.50%)
No	17 (23.90%)	28 (21.70%)	45 (22.50%)

Source: Field Survey

As 78.3% female compared to 76.1% male on their own decided about entering this particular profession, that indicates that female are equally interested in the software job. Further 'self decision making ability' is an important attribute required for the software job.

6.9 Socio-economical Factors

'Social conditions' in typical traditional societies specifically influence the career prospects of not only female even of male. But these customary controls will be more rigid for female. Hence, 'social status' of a job and 'social acceptance of female in that particular job' helps female aspirants to get essential supportive environment.

6.10 Social Status and Social Acceptance

Among different IT industry jobs software jobs carry high social status and increased social acceptance of female employees too is observed. 83% of both male and female respondents agreed that their job has given them a social status and 95% of the male and female said that their families are supportive to them.

Obviously, this social acceptance allows parents to help their daughters to study IT courses and join IT sector. But this 'social acceptance' cannot be taken with all IT industry jobs. For example ITES jobs still are not acceptable in spite of increasing number of female employees. And as found by Neetha (2008) due to their BPO jobs some of the female employees are not finding grooms. Further researcher herself observed that in spite of being selected in the campus selection many parents are not allowing their daughters to join ITES sector. Anyhow software sector jobs are well accepted for female and to a greater extent branded as female friendly jobs. Due to this social status and acceptance of the job more and more female are attracted towards software field and education courses.

6.11 Possession of Working Relatives in the Same Sector

During interview a senior faculty member of an engineering college seriously argued that to enter and sustain in the IT profession 'relatives are working in the same industry' is essential for female. The idea is, possession of relatives in the same sector helps people to get idea and knowledge about the profession and the ways through which entry can be made and about the adjustments and skills required to sustain in the job.

Table 7: Perception about the Necessity of Relatives

Perception about Relatives' Necessity	Male	Female	Total
Yes	5 (7.00%)	5 (4.00%)	10 (5.00%)
No	66 (93.00%)	124 (96.00%)	190 (95.00%)

Source: Field Survey

Table 8: Actual Possession of Relatives in Software Sector

Actual Relatives in Software Sector	Male	Female	Total
Yes	47 (66.20%)	77 (59.70%)	124 (62.00%)
No	24 (33.80%)	52 (40.30%)	76 (38.00%)

Source: Field Survey

Especially for female it may help as their parents comparatively feel relaxed about the profession and may accept to send their daughters to the job. Further 'Employee referral' is one of the recruitment method followed by the software companies where persons easily refer their

relatives. When this statement was tested with the employees' perception and their actual possession of such relatives there was a contradiction. 93% of male and 96% of female respondents disagreed with the statement as evident in Table 7. But the actual possession of relatives in the same sector is 59.7% for female and 66.12% for male as presented in Table 8. As per Table 8 comparatively more male respondents had working relatives in the same sector. Hence, the notion doesn't carry only female-specific significance rather for both male and female it applies. Even if the point needs much more clarification, it obviously indicates increasing social concentration among software employees. Further, the recent trend is that in most of the MNC's and private company interviews are done with the intention of collecting information about candidate's socio-economic background and familiarity with the industry, and questions are asked about having working relatives in the same industry. Obviously 'having relatives in the IT profession' is not an essential factor but it will be an advantage to enter the industry for both male and female. But further it has the danger of increasing 'digital divide' within women employees as women belonging to certain societal groups, having network through the working relatives may dominate the profession.

6.12 Educational Factors

IT companies have not restricted their employment to engineering graduates. Even if general graduates are employed by IT companies which seems favourable to female needs further verification. In educational background the type of education, medium of education, availability of the information regarding career paths at suitable time are crucial. Hence in education related factors 'type of education', 'medium of education' and availability of career guidance at colleges has been analyzed.

6.13 Type of Education

Normal presumption is that people with technical education can enter the software industry. But **Pande (2004)** explains that IT industry employs people with any formal education whom it can mend easily for the industry's requirement. But Table-9 presents that even if professional and general graduates are employed, there is a clear bias towards technical personnel.

Table 9: Gender based category of education

Category of Education	Male	Female	Total
Technical	58 (81.70%)	93 (72.10%)	151 (75.50%)
Non-Technical	13 (18.30%)	36 (27.90%)	49 (24.50%)

Source: Field Survey

81.7% of the male and 72.1% of the female were technically qualified. But proportion of non-technically qualified too is considerably more for female employees i.e. 27.9% against 18.3% for male. Still majority of them are technically qualified. There seems no significant gender based discrepancy.

Overall, IT industry is highlighted for employing non-technically educated candidates too. But the reason for increased number of general graduates and non-technical personnel seems to be

due to the ITES-BPO segment rather due to the software sector. So still there is preference for technical personnel from software companies.

This preference for technical personnel has its own implication for female as their enrollment in the technical courses whether at higher, much costlier engineering courses to less dear diploma courses is very much constrained. Among general graduates companies prefer personnel with mathematics and statistical background which further indicates the required changes in the subject preferences of the aspirants. But such bias towards technical personnel is not female friendly as still proportion of female enrolled in technical courses is very less.

6.14 Medium of Education

Software companies require personnel having proficiency in English language. Even if there are several other ways to acquire that proficiency, generally known method is 'the medium of education'. In spite of the employment of non-English medium people still there seems bias towards English medium educated candidates.

Respondent's perception about the necessity of English medium education and their actual medium of Education there seems to be gender based difference. Because in Table 10, 69% of the male against 46.5% female opined that English medium of education is not necessary. In Table 11, 68.2% of female against 60.6% men actually studied in English medium.

Table 10: Perception about Medium of Education

Medium of Education - Perception	Male	Female	Total
English medium education necessary	22 (31.00%)	69 (53.50%)	91 (45.50%)
English medium education not necessary	49 (69.00%)	60 (46.50%)	109 (54.50%)

Source: Field Survey

Table 11: Actual medium of education

Medium of Education - Actual	Male	Female	Total
Non-English medium Background	28 (39.40%)	41 (31.80%)	69 (34.50%)
English medium Background	43 (60.60%)	88 (68.20%)	131 (65.50%)

Source: Field Survey

Hence for male the medium of education may doesn't carry much influence but for female it seems to influence more. The reason is other than 'medium of education' male have the opportunity, liberty and mobility to get language proficiency through attending other language courses whereas for female there are constraints. Hence, 'medium of education' becomes more relevant for women compared men in entering the IT profession. But affording English medium of education is difficult for rural and poor urban female. If government adds 'English' as a subject from the early education stages it may help not only female but male belonging to rural and urban poor.

6.15 Availability of Career guidance cell at Collage

As Parikh and Sukhatme (2004) explained, finding first employment is the main problem for female engineer graduates. Hence, career guidance available at college campus becomes more essential as female mobility and exposure to practical experience is restricted due to social barriers. Nowadays in all technical and non-technical colleges Career guidance cell is available. These cells not only provide information but arrange for campus selection recruitment which is

the highlighted route through which female take entry to the employment. Table 12 shows that 67.4% of the female respondents utilized available career guidance at collage compared to 56.3% male respondents.

Table 12: Availability of career guidance at Institute

Career Guidance at Institute	Male	Female	Total
Available	40 (56.30%)	87 (67.40%)	127 (64.50%)
Not-Available	31 (43.70%)	42 (32.60)	73 (36.50%)

Source: Field Survey

Obviously, compared to men more women are dependent on the career guidance cells of the collage to enter the IT field.

Another observable thing is among the 32.6% who responded as 'not available' includes female from engineering colleges. This indicates that even today in all engineering collages proper career guidance is not assured. As **Parikh and Sukhatme (2004)** explain, most of the female engineering students are in the rural areas and small towns which lack development and infrastructure. Their enrolment in IITs, and REC is very less. Hence, due care has to be taken for developing proper career guidance cells at engineering collages situated in small cities and towns.

6.16 Organisational Factors

There are organizational restrictions for female entry to the profession. Recruitment method was biased towards male and gender specific questions were asked during interview. And interview committee may involve only male members. Therefore such organizational factors like recruitment method, structure of recruitment in terms of recruitment committee members and questions asked during interview were verified later.

6.17 Recruitment Method

There are four major method of recruitment followed by the Indian IT industry. They are 'Campus Selection', 'Employee Referral', 'Open Advertisement' and 'Direct interview'. Researcher tried to analyse whether all these four methods equally allow female aspirants to join the industry. But as per Table 13, 39.5% of the female got their job through 'campus selection', 25.6 through 'direct interview', 17.8% through 'open advertisement' and 17.1 through 'employee referral' method. Respective male proportion is 26.8%, 16.9%, 14.1% and 42.3%.

Table 13: Gender and Mode of Recruitment

Mode of Recruitment	Male	Female	Total
Campus Selection	19 (26.80%)	51 (39.50%)	70 (35.00%)
Employee Referral	12 (16.90%)	22 (17.10%)	34 (17.00%)
Open Advertisement	10 (14.10%)	23 (17.80%)	33 (16.50%)
Direct Interview	30 (42.30%)	33 (25.60%)	63 (31.50%)
Total	71	129	200

Source: Field Survey

Obviously 'campus selection' is the major source of employment for female. 'Lack of mobility', 'networking' and 'lack of practical exposure' added with the parents hesitation to send their girls outside, female's scope for search for first job is very much limited. As companies themselves are moving towards educational institutions for recruitment definitely it is helping female more.

6.18 Structure of the Interview

Frame work of questions and presence of only male members found to be favourable to male in European studies. International studies revealed that at the time of interview itself gender based questions were asked presuming the instability of female candidates after having family or child.

6.19 Gender based Questions

There are anecdotal reports available saying that some companies do not even allow women graduates to appear in the campus interviews denying them entry into the profession. At times the interviews are sexist in nature putting women graduates at a disadvantage. Regarding gender based questions asked during interview, as per Table 14, only 8.5% female and 10% male respondents accepted the fact.

Table 14: Did you face gender based questions during interview?

Gender based Questions	Male	Female	Total
Yes	7 (10.00%)	11 (8.50%)	18 (9.00%)
No	64 (90.00%)	118 (91.50)	182 (91.00%)
Total	71	129	200

Source: Field Survey

In spite of the fact that proportion is less, it indicates the 'presence of such problem'. Further even if majority of the female replied negatively still most of the female doesn't like to respond such questions or they may not be that much 'gender sensitized' so as to understand the gender specific nature of the questions asked. Another point to be noted here is that such gender based questions are not female specific even male faced such gender based questions.

6.20 Presence of women member in the recruitment committee

Parikh and Sukhatme (2004) recommend the inclusion of female members in the recruitment committee to increase female entry to the engineering profession. Logic behind the suggestions is that, female members in the recruitment committee without showing any extra favouritism simply with their presence among female candidates can reveal a psychological relaxation. Further according to the situation they may help candidates not to get tensed during interview. And due to their presence in the committee 'gender based questions may be avoided'.

To verify this benefit of presence of female member in the recruitment committee respondents were asked whether when they faced interview there was any female member. If yes, did it help them? According to Table 15, 40.8% male and 57.4% female said that while facing interview there were female members in the recruitment committee.

Table 15: Was there female member in the recruitment committee?

Female Member in the Recruitment Committee	Male	Female	Total
Yes	29 (40.80%)	74 (57.40%)	103 (51.50%)
No	42 (59.20%)	55 (42.60)	97 (48.50%)
Total	71	129	200

Source: Field Survey

This is an indication of increasing 'gender awareness' in the software companies and as a policy measure or 'gender inclusivity practice many companies are appointing women members in the Recruitment Committees.

Regarding its benefit as indicated in Table 16 about 31% of male and 24% female had accepted that they were benefitted by the presence of female member in the recruitment committee.

Table 16: If yes, did it help you?

Female Member in the Recruitment Committee - Help	Male	Female	Total
Yes	22 (31%)	31 (24%)	53 (26.5%)
No	49 (69%)	98 (76%)	147 (73.5%)
Total	71	129	200

Source: Field Survey

Even if in percentage terms it is not a considerable impact but neither it is possible to ignore. Another observable point is that, the benefit is not only for female candidates' but even male candidates experienced it to some extent greater than female. Probably female employees hesitate to realize their impact or they couldn't perceived the effect of female members in the recruitment committee.

7. SIGNIFICANCE OF THE GENDER BASED DIFFERENCE OF THE VARIABLES

Following table 17 provides the respective χ^2 values and their significance level.

Table 17: Significance of the gender based difference of the factors.

Sr. No.	Explanatory Variables	χ^2 values	
		Calculated Value	Significance Value
1	Personal Level conditions		
1.a	Interest in the profession	0.132	.717
2	Socio-economic conditions		
2.a	Religion	0.171	.679
2.b	Caste	2.691	.260
2.c	Place of origin	1.482	.224
2.d	Economic Status	1.190	.121
2.e	Possession of relatives working in the same industry	0.823	.364
3	Educational Conditions		
3.a	Type of education	2.280	.131
3.b	Medium of education (perception)	9.351	.002*
3.c	Medium of education (Actual)	1.187	.276
3.d	Availability of career guidance	2.436	.119
4	Company Recruitment conditions		
4.a	Mode of the recruitment under which got entry to the profession	6.566	.087***
4.b	Presence of Women member in Recruitment Committee	5.003	.025**

Source: Field Survey

Note: Tables in the parenthesis are the respective significance values and * presents significance at 1%, ** at 5% and *** at 10%

As per above table 17 there is no significant gender based differences among personal, socio-economic and educational conditions. Among educational conditions significantly female consider 'English medium education is necessary' but actual medium of education does not reveal any significant variation. Most of them were from English medium of education.

But company recruitment method and presence of female member in recruitment committee differs significantly. Relatively majority of the female employees joined their jobs through recruitment method whereas male employment is not significantly affected by the recruitment method. Presence of female member in recruitment committee is highly significant.

8. FINDINGS

Following are the important findings.

- General observations presents increasing digital gap within women employees as most of them belong to Hindu religion, upper and dominating castes and upper middle class. Age profile and service information represents late entry of women to the sector compared to men. Pattern of employment indicates increasing number of women in the 'technical' areas compared to non-technical positions. Most of them are at the entry level. But they perceive themselves to be at middle and higher level.
- At personal level, women finding interest in the software profession and their confidence about the technical competence is increasing.
- Socio-economic conditions present increasing social acceptance of women in the software profession. Parents and families are supportive to the women software employees. But social concentration is observed as most of them had working relatives in the same sector. But the benefit of having such relatives is not limited to female only rather male too are benefitted.
- Educational information indicates bias towards technical personnel in spite of the increasing employment of non-technical personnel. Again bias is observed towards those who studied in 'English medium'. Further most of the women are benefitted by the availability of career guidance cells at colleges.
- Organizational 'campus recruitment' procedure is in favour of women compared to other recruitment methods. Gender based questions still persist during interview in spite of their reduction. Companies are appointing more and more women members in the recruitment committees which not only benefits female rather male too get the benefit.

9 SUGGESTIONS AND CONCLUSION

Following are the important suggestions based upon the findings;

- Increasing social concentration of female belonging to certain socio-economic background is evident that needs to be controlled or else it will enlarge the digital divide within female employees.
- Provision of 'technical education' at concessional cost to female will be beneficial.

- As companies are also employing women with non-technical education due changes in the usual course curricula may increase their employability. If female study quantitative techniques as a part of their course probability of employment in software sector increase. Hence, in general graduation courses such quantitative techniques needs to be added.
- There is a clear bias towards English medium students but cost of affording English medium education is difficult for most of the rural, poor middle class female. Hence, early introduction of English as one of the language in the education will help them.
- Availability of career guidance at collages is very much necessary for female entry to the job market such cells effectiveness needs to be improved.
- Organizations are of course adopting several measures to increase women's entry still their policies needs to be properly implemented. Gender based proportional recruitment from all the four methods may improve further number of female in the industry.
- Structure of the interview in terms of members and questions asked during interview needs to be formulated with proper attention. Presence of female member in recruitment committee needs to be increased more. And strictly directions to be given to the members to avoid any gender based questions.

In conclusion, majority of 'Entry conditions' seems to be gender neutral for female entry to the software profession. Social conditions are favourable, personal interest and aspirations about software employment among women too are increasing. Further organizations are upfront to take up any positive measures that ease the entry of the women to the industry. Still But at educational level bias towards technical personnel and 'English medium students' may pose problem because in India proportion of women in the technical education is very less and most of the women doesn't have the capacity to afford 'English medium education'. Here with respect to the provision of education government initiatives are needed.

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