Glass ceiling factors affecting women career advancement in IT industry in India

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Abstract. Women in IT industry is concentrated more in the lower management level and encounter a glass ceiling which is a hindrance as they climb up the career ladder to top management level. This study presents about the glass ceiling factors that affect the career advancement of women in IT industry in India. This study attempts to identify factors which contribute to the glass ceiling which affect women career advancement. Several factors were identified while reviewing the literature; they are personal factors, organizational factors and societal factors. It also aims at finding out which factor from the identified factors contribute more hindrance to the career advancement opportunity for women. Conceptual model is designed based on the information from literature review; whole study is structured based on this conceptual model. Data is collected by floating a questionnaire to the women employees working in IT companies in India. Sample consists of 57 female employees from different IT companies who are in middle level management and in senior level management. From the analysis of the data collected, it is seen that societal factors contribute more hindrance to the women in advancing their careers, women perception about themselves and management perception about women reaching higher position also plays an important role.

Key Words: Glass Ceiling, Personal factors, Organizational factors, Societal factors, Career advancement.

1. Introduction

There exists a prevalent issue of gender bias with respect to career advancement of women in big corporations (Sharma and Seharwat, 2014). In India women are still seen weak, emotional and unaggressive to hold higher level management positions. It is observed that gender based discrimination is still subsisting to scale up to senior level. (Bhosle and Barik, 2014). Corporate career typically have a span of 40 to 45 years (Lynch and Katherine, 1998) and even in their 40-45 years of service, they are not able to reach the C-level. Out of 1000 fortune companies, only 5% of the women are serving as senior managers (Federal glass commission report,1995). Many women are working in the IT sector, but less women on top management of the corporation.

Achievements of women are devalued and it is represented as luck rather than their ability or skill (Deaux, 1976; Heilman, 1983), this effect them as it reduces the chance to advance in their career. It is also seen that the difference is not only in the career development, but also in the compensation they receive. (Blau & Ferber, 1992). Developmental opportunities for women are less when compared to men which indicate there is gender bias is significant for developmental opportunities. Job characteristics associated with higher level positions are absent in women(Ohlott, Ruderman, & McCauley, 1994). Men are chosen for job which involve risk, less chances are there to chose women for such assignments. Primary importance for any organization is the effectiveness of the team(Pavithra et.al.,2017)
2. Literature Review

According to Wall street journal,1983 “Glass Ceiling” is defined as the barriers that prevent women from ascending to senior management positions in corporations. Glass ceiling is not one ceiling or wall, they are varied and pervasive forms of gender bias that occur frequently in both overt and covert ways. (Chamaru and Bambuvela, 2013).

Corporate argues glass ceiling doesn’t exist (Rai and Srivastava ,2008). According to them women are not promoted to higher positions as they have a tendency to leave the jobs in middle, lesser working hours, doing low risk jobs. Number of opportunities are there for women in advancing their career as they are present at organizations that operate globally. Women are hardly at the higher level of managerial jobs(Kelkar et.al 2002, Upadhya 2006). Individual are judged according to the congruence between their characteristics. Organizations prefer female leadership when the organization performance is poor (Bruckmüller et.al ,2010) and Ryan et.al,2011).Studies reveal that to perform successfully in such situation leader requires feminine attributes such as being sympathetic, relationship-orientation, service oriented and caring.

In India limited research is done in the area of barrier women face while climbing up the corporate career. (Gupta, 1976). Men presume they have more managerial skills than women, they believe “think manager- think men”. Many of the jobs in IT, specially leadership roles are considered as masculine than feminine (Gutek, 2001). Competitiveness, self-confidence, objectiveness, aggressiveness, and ambition are seen as agentic attributes and they are seen as prerequisites for success in the IT sector in general and especially for leadership roles in IT organizations.

Career development is directly linked with the goals and objectives set by an individual. Career development is starting with self actualisation and self assessment. The interest of the individuals is taken into consideration and matched them with the available options. Employee need to train himself/herself to acquire the skills which is absent in them to excel in their career. After acquiring required competencies employee have to perform and achieve the targets and goals set by them.

Number of studies now revealed that there exists “Glass ceiling” or feminization in IT industry, because of which more women are at the lower level of job in the IT industry (Ghosh and Bhattacharya,2012). At the managerial position very few women are working, few of them working middle management as Project managers, Team leads, Lead Consultants whereas a majority of the employees are working in the lower level as programmer analyst, support analyst, specialist and testers. A Study conducted by Shankar (2008) among IT Companies in Bangalore revealed that female employees are mostly concentrated at the lower management roles, than at the middle and top management roles, which creates glass ceiling. Some of the factors affecting glass ceiling is identified and some of them are:

1) Personal factors
2) Organizational factor
3) Societal factors
4) Demographic features

**Personal Factors:** Under personal factors, ability to work, willingness to do the assigned job, self-perception about themselves, family work balance have been cited as factors determining career development. This shows the extents to which individual factors come as barriers for women's career development Family work balance shows how relation of the female employees affect their performance.

**Organizational factors:** Organization policy, organization culture, perception of the management towards the advancement of the women in higher roles are some of the factors under organizational factors. Organizations are reluctant to invest in women employees, as they perceive women may quit the job. Women have fewer promotion opportunity, despite having high coordinating ability.

**Societal Factors:** Beliefs and stereotype are the factors identified under societal factors. This refers to the extent to which the beliefs, traditions and influence the employee development.
3. Objectives of the Study

There is a significant rise in the women participation in the workforce over past few years. But it is commonly seen career advancement opportunities are less for women when compared to men. Reasons of this bias are clearly associated with the idea of a glass ceiling. (Afza and Nawaz, 2008).

Some of the objectives of the study are:
1. To identify which factors contributes to glass ceiling.
2. To find out how glass ceiling effect the career advancement of women employees
3. To rank the glass ceiling factors that exists for women in IT sector.
4. To examine how management’s perception affects the female employee’s promotion to senior level

4. Research Gap

Literature have spoken about the glass ceiling factors and and there is a dearth of work about which factor (personal, organizational and societal) contribute more to the glass ceiling and career development, what measures are taken by the organization to help women, breaking the glass ceiling. Societal factors influencing the organization in framing the organizational policy are limited in previous studies, which are studied here.

5. Conceptual Model

The main idea highlighted by this conceptual model is, how Glass Ceiling affects career advancement of women. Factors contributing to glass ceiling is considered as the independent variable. Career advancement of women as the dependent variable(CA). Societal factors(SF), Personal factors (PF), Organizational factors (OF) as independent variables in this model.

SF (stereotype and belief), PF (ability to do work, willingness to do work, self perception and family work balance), OF (organizational policy, organization culture and management perception).

The model using in the study is as follows:

CA = function (Glass Ceiling)
CA = function (PF, OF, SF)

Figure 1. Conceptual Model

Figure 2. Detailed conceptual model
6. Methodology

Relevant data for the study is collected by survey method. Primary data were collected to diagnose the problem answers the research questions and achieve the objectives. Thus the survey method is regarded as most suitable one. Survey instrument is the questionnaire. The study was conducted among women from different IT companies, sample is exclusively comprised of women employees as it the research is on women oriented issue. Women who are working in the middle level and senior level were considered. A sample of 57 female employees was studied using a questionnaire, based on five point Likert scale ranging from 5 to 1, they are asked to mark their response on based on the agreement to the sentence, from to great extent to no extent. 54.4%(31) of the respondents are in the mid level and the rest 45.6%(26) is in senior level position. Glass ceiling factors were included in the questionnaire namely, personal factors, organizational factors and cultural factors. Demographics of the employees are also taken into consideration.

7. Hypothesis Creation

Maheshwari (2012) spoke about glass ceiling barriers which can be broadly classified into three categories namely, individual, societal and organization related barriers. Based on the literature reviewed, this study take into consideration three factors which effects the women's career development, namely personal factors, organizational factors and societal factors and formulated following alternative hypotheses,

Hypothesis-H1: Individual Factors does not effect significantly on career development of women.

Hypothesis-H2: Organizational Factors does not effect significantly on career development of women.

Hypothesis-H3: Societal Factors does not effect significantly on career development of women.

8. Analysis and findings

The data obtained from the response of the questionnaire is analyzed and found out which glass ceiling factor contribute more to the career advancement of the women in organization. According to Marshall and Rossman (1999), data analysis is the process of bring the collected data in an order, structuring it and interpreting the same. The data collected from questionnaire were systematically organized in order to facilitate the analysis. In data analysis the data is cleaned and coded. It is coded in Microsoft excel which is compatible to the tool WEKA. The data is then loaded to the tool and regression is done. One of the objective of the study is to find which glass ceiling factor contribute more to the advancement of the career, so portions of regression is done. Linear Regression of the factors gave the result how glass ceiling factors the advancement of women in the career. Ranking among the factors is done. The result of the Analysis is following in the next session.

9. Results and discussion

In order to find out which factor contribute more to the career advancement, regression is done in portions and it is seen that societal factor contribute more the career advancement of the women. Societal factor is highly correlated to the career advancement, by 77.77%. The next factor which is having significant effect is the organizational factors by having a correlation coefficient of 75.39% and then the personal factors which is having a correlation coefficient of 75.24%.

While performing the linear regression on the personal factors and the career advancement, it is seen that out of Ability, Willingness, Self perception and Family work balance the one which is having significant impact is willingness and family work conflict. In case of the organizational factors which include organizational policy, organizational culture and the perception of the management, the significant one is organization policy. While considering the societal factors, which are societal belief and stereotypes. It is seen that both have significant effect in the advancement of the career.
While performing a linear regression with all the factors, it is seen that the correlation of all these factors with career advancement is 90.29%. The significant factors are ability, family work balance, organization policy, organization culture, perception of the management, belief and stereotype. Table 1 summarizes the result.

Table 1. Result Summary

| X-Variable       | Y-variable          | Correlation coefficient |
|------------------|---------------------|-------------------------|
| Personal factors | Career Advancement  | 75.24%                  |
| Organizational Factors | Career Advancement  | 75.39%                  |
| Societal Factors | Career Advancement  | 77.77%                  |
| Glass ceiling factors | Career Advancement  | 90.29%                  |

All the factors are significant, as the correlation coefficient of all the factors are above 75%. Even though from the three the highest value is seen for societal factors. All the hypotheses are rejected as it is seen from the result that, there is significant impact of all the factors (Personal, Organizational and Societal) on women career advancement. In order to rank the factors, the data is converted from numeric to nominal, and the ranking is done using WEKA. The factors which comes first is the Self perception, stereotype and belief in second and third position respectively. Rank of the factors is mentioned in table 2.

Table 2. Rank of the factors

| Rank | Factors                                                      |
|------|--------------------------------------------------------------|
| 1    | Self Perception about the ability                           |
| 2    | Stereotyping in society                                     |
| 3    | Societal belief                                             |
| 4    | Management perception in employing women in senior level    |
| 5    | Willingness                                                 |
| 6    | Organization Culture                                        |
| 7    | Family work balance                                         |
When considering the equal opportunity for men and women while recruitment, 91.2% of the respondents said in their organization there is equal opportunity considered while recruiting a candidate. After their recruitment, the next check is on the equal opportunity in their deployment, 87.7% of the respondents tells that they have equal opportunity in deploying the employees.

While checking on the number of employees in different levels of management the study result shows that women are majorly in the lower management and very less in the top management. In the middle level of management even men are more but not very high in number as top management. It seen from the study that, if the perception of the management is positive towards the progression of women to higher position, women face less barrier while promotion, less discrimination in the performance appraisal and task assignment. 49.1% of the respondents believe that discrimination of women in appointments affect their progression to top management.

### 10. Conclusion

This paper discusses about the glass ceiling factors, how these factors affect women in their advancement of the career. The study was done in particular to the IT industry. Prominent factors of glass ceiling factors identified through literature review are personal, organization and societal factors. The factors were identified, validated in the study, how they affect career advancement is studied. From the data analysis it is found that societal factors are the one which hinder the women from climbing their career ladder. Other factors like personal and organizational factors contribute almost in equal amount to the hindrance in climbing up the career ladder. Better conducive environments is attained in an organization through providing the employees good work life balance (Ambily et.al,2015). Social support from the colleagues and family plays an important role in career advancement (Rathi. N et.al,2013). The level of mobility, decision making power of women is now changing and more women are into entrepreneurship.

IT industry is the fifth largest industry in India, it contributes to almost 8 percent of the country’s GDP (India Brand Equity Foundation report,2017). From the result we could understand that it is the societal belief and stereotypes need to be changed to reach in heights. Despite being this big industry, women are less in top management, organization can help them in reaching the higher position by reducing the gender bias in the organization and by having positive attitude toward the women promotion to higher positions, by this organization can be trend setters to other organization. The one next to be changed is the way women perceive about themselves, from the analysis we could understand that women are capable of doing things and they are willing too but the way they perceive about themselves hinder themselves from reaching heights n their career.

### 11. Limitations

Limitations of the study are, detailed discussion can be done with the managers and the respondents. Face to face interview of at least five people can be taken into account to understand much broader perspective of the issue. Here the study considered only one country, India global perspective can be taken to have a broader picture.

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