CHAPTER 5

ANALYSIS OF THE DATA – I
Glass Ceiling: Myth or Reality?

Is there a Glass Ceiling?

Facts are stubborn things; and whatever may be our wishes, our inclinations, or the dictates of our passions, they cannot alter the state of facts and evidence.

— John Adams

Introduction

In October 2014 Microsoft Corporation and its CEO made headlines for all the wrong reasons. The CEO of Microsoft confessed on social media that women earn lower pay packets than men. He suggested that women in technology should not ask for pay raises, rather they should “trust the system” and rely on “Karma” to get what they “deserve” (Deccan Chronicle, Mysore, October 13, 2014), a statement he later retracted. In 1978 Microsoft Corporation had 11 employees only 2 of whom were women. Even today only one third of its employees are women. According to the U.S. Census Bureau report of September 2013, the fact remains that while the number of available jobs in computer science is expected to grow to 1.4 million in 2020, the Bureau found that women’s representation in science, technology, engineering and mathematics occupations - commonly referred to as STEM jobs - has actually been on the decline since the 1990s. Women's employment in STEM has slowed because their share in computer occupations declined to 27 percent in 2011 after reaching a high of 34 percent in 1990. While women make up nearly half of the workforce in general, they were only 26 percent of the STEM workforce in 2011. Men with a bachelor's degree in science or engineering and in full-time employment in STEM occupations earned $91,000 per annum, compared with women who earned $75,100 on average (U.S. Department of Commerce, 2013). In India too according to a survey conducted by Catalyst, women reported earning Rs. 3,79,570 (approximately US $6,000) less than men in their current jobs, the gender-pay gap widening over a period of 12 years. A report published by Catalyst entitled “High Potentials under High Pressures in India’s Technology Sector”, on a study of 713 men and women of which 31% were women and 69% men, found widening in the pay gap by about Rs. 3.8 lakhs over a 12 year period (Catalyst: 2014).
When we therefore ask the question “Is there a glass ceiling for women in the IT sector?” tragic though it may be, yes there is rampant gender inequality in the IT world. However, here we also have to look sociologically at the conceptual problem beneath the emotion and the disappointment and examine the question on all counts theoretical and empirical. In this chapter one has tried to, through analysis of primary data, see whether this prevailing inequality is indeed as reported and further whether it is in fact that specific type of inequality known as the glass ceiling. The data collected for the study has thus been systematically analysed to (a) find out \textit{de novo} if there is inequality and if so what is the nature of that inequality and (b) what are the possible causes of this situation. The first step to understanding the nature of the prevailing inequality would be to define glass ceiling itself in a suitable fashion as a concept fit for analysis. Hence in this chapter the concept of glass ceiling has been sociologically stated as a prelude to examining the existence prima facie of glass ceiling, and thereafter the primary data have been systematically analysed to ascertain the presence of glass ceiling. The two chapters that follow, attempt to determine the reasons thereof.

\textbf{Operationalising the Concept of Glass Ceiling}

It was seen in chapter 2 that there are varying definitions of the phenomenon of glass ceiling and often the term tends to be used arbitrarily to refer to any and every inequality. Because of this lack of definitional clarity it is often difficult to determine if women or other socially disadvantaged groups really face a glass ceiling. One can form a crude conception of a phenomenon based on its populist understandings and hazard broad based definitions that suffice for the purpose of communicating an idea. But, the concept of glass ceiling as does any concept for that matter needs to be appropriately refined in order that it can be empirically tested and theoretically founded. Here I have taken for consideration the four conditions set forth by Cotter et al (2001) elaborated in the literature review as the starting point for clarifying the concept of the glass ceiling effect. There are as we saw many other definitional variants for describing the glass ceiling. This particular conception has been selected above all others as it provides by far the most comprehensive definition for the phenomenon. The four stipulated criteria suggested by Cotter et al have been recapitulated as below. In general according to the authors broadly speaking four
distinctive characteristics have been identified that must be met to conclude that a glass ceiling exists. A glass ceiling inequality represents:

1. A gender or racial difference that is not explained by other job-relevant characteristics of the employee.
2. A gender or racial difference that is greater at higher levels of an outcome than at lower levels of an outcome.
3. A gender or racial inequality in the chances of advancement into higher levels, not merely the proportions of each gender or race currently at those higher levels.
4. A gender or racial inequality that increases over the course of a career.

– Cotter et al. 2001

This definition though is not without its drawbacks. Cotter’s definition arguably the most comprehensive one presents a certain epistemological problematic. The first criterion viz., a gender or racial difference that is not explained by other job-relevant characteristics of the employee, is based on subjective reasoning and cannot be empirically tested in a standardised fashion. Furthermore, this is a manner of defining a concept through its causes or lack thereof. To define a concept through its cause/s signals a fundamental postulational fallacy. It would be like putting the cart before the horse. If we wish to study glass ceiling through objective criteria then the first criterion cannot qualify for inclusion in the definition. The other three criteria capture the spirit of the glass ceiling inequality but as a researcher one needs to re-spell them in terms of tangible and clear indices.

That being the situation the prevailing definitions of glass ceiling inevitably pose certain challenges for sociological inquiry. Agreement on one particular definition is of course not strictly needed; usually that becomes necessary in the pure and mathematical sciences as an aid to quantitative comparisons across different data and in the present case across different outcomes - unequal authority, earnings, etc. - all of which may or may not indicate that a glass ceiling exists. In the discipline of sociology however one has the liberty to define phenomena in a manner suited to one’s own theoretical and epistemological stance. Nonetheless it is important to stay consistent with that conceptual understanding through the course of a research.

**Glass Ceiling as a Social Fact**

When we talk of defining a phenomenon by implication what we are defining is the derivative concept of that reality. Concepts constitute the prescriptions of what
has to be observed; they are the variables between which empirical relationships are to be sought. It is a truism worth restating that the choice of concepts guiding the collection and analysis of data and the manner in which these have been defined is crucial to empirical inquiry. A scientific explanation of a phenomenon requires that in the first instance the problem in question be suitably clarified. Only then can pertinent data be meaningfully collected and analysed. According to Merton, “It is, then, one function of conceptual clarification to make explicit the character of data subsumed under a concept” (1968: 145). While I do not necessarily uphold the view that scientific knowledge has to be essentially objective fundamentally neutral knowledge, even so in the interest of maintaining the integrity of the scientific enterprise it becomes particularly important to define the object of inquiry in an as lucid and unambiguous manner as possible.

Furthermore, conceptual analysis is meant to perform the task of instituting the observable indices of the social data subsumed under the domain of specific empirical research. I have therefore chosen here to present my understanding of glass ceiling as a social fact. Thus considered the term glass ceiling as a concept can be defined with reference to the externally observable characteristics of the phenomenon thereby eliminating subjective biases and precisely specifying the indices through which it can logically be observed empirically. Though glass ceilings may be the result of several factors such as covert or overt discriminatory work practices and outmoded social values, the concept of glass ceiling cannot be primarily defined through its probable causes. The aetiology of a glass ceiling cannot be the defining attribute of glass ceiling. Here then I agree with Durkheim that: “The subject matter of every sociological study should comprise a group of phenomena defined in advance by certain external characteristics, and all phenomena so defined should be included within this group” (Durkheim, 1938: 35).

Defined this way the concept of glass ceiling is thought rendered fit to be empirically tested. Viewed as a social fact, whenever there are fewer women than men at the top levels in an organisation we have to give it the name glass ceiling regardless of the causative factors for the situation. Glass ceiling thus for the purpose of our understanding is not to be a term imbued with value. It is the absence or presence of women in proportion to men at progressive levels in the organisation that shows or refutes the existence of glass ceiling in operation. The mere existence of a glass
ceiling however does not ipso facto signify workplace discrimination. To prematurely attribute primary causation would be to succumb to yet another epistemological fallacy. Causal explanation has to emanate from deeper investigation of the social forces responsible for the glass ceiling to manifest.

**Glass Ceiling Defined**

One’s own perception therefore is that following Durkheim glass ceiling could be sociologically studied as a social fact\(^1\). Accordingly going by the conception of social fact and in the interest of academic rigour and objectivity of analysis I have chosen to define Glass Ceiling with the least possible reference to its valuational attributes. It is therefore proposed that the glass ceiling inequality be defined as follows:

A glass ceiling can be said to exist when there are progressively fewer women than men at each successive level in the organisational hierarchy given that women and men so considered have more or less similar levels of educational attainment; and when this gap between the number of women and men alters at each successive level to the detriment of the women. Stated another way when men outnumber the women at each successive stage in their job hierarchy and are able to reach an organisational position while bearing similar or lower educational qualifications than for the corresponding women, and when there is a progressive increase in the numerical distance between men and women at each successive upward step in the organisational ladder we can conclude the existence of a glass ceiling. These two statements are not mere tautologies of rhetoric. The second proposition emerges as a corollary to the first one and elaborates and clarifies the meaning of the first. Glass ceiling is thus to be inferred in situations when there is a progressive decline in the number of women as compared to men as one goes up the organisational ladder. It is a gender inequality that *increases over the job hierarchy* (and not in the course of *a person’s* career) as dispersed in the various career levels as a social fact.

A glass ceiling is also to be deduced when men with equivalent (or lesser) qualifications show a greater probability of reaching a coveted

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1 Durkheim defines social fact as follows: “A social fact is every way of acting, fixed or not, capable of exercising on the individual an external constraint; or again, every way of acting which is general throughout a given society, while at the same time existing in its own right independent of its individual manifestations” (Durkheim’s original definition cited in Thompson, 2002: 42).
organisational level outracing their women contemporaries despite the academic credentials and job tenure of the latter.

Further, glass ceiling is to be inferred when women with similar qualifications earn lower salaries than men at same levels of the job hierarchy and that this difference increases over the course of a career widening at each successive job level.

A glass ceiling may be inferred when any of the above conditions are brought into existence.

Though an individual’s career path may or may not show glass ceiling to be in operation the inequality itself has an a priori existence over and above that of the individual and his or her career concerns. Incumbents at various jobs may change but glass ceiling as a social fact remains uniform throughout the organisation and by extension the entire sector of the industry. It is for this reason that statistics pertaining to glass ceiling have remained more or less consistent across organisations and when collected by different agencies including in the present survey. As a social fact the glass ceiling is external to the individual, it is general throughout the given structure; it exerts a coercive power over the individual and has an existence beyond the professional tenures of individual men and women managers. It is not the product of the individual whim and whatever may be the liberal mindedness of an individual disposition glass ceiling as a social fact is to be found in a uniform measure in any given career universe.

Usually studies including the present one show that these criteria though apparently mutually discrete in fact empirically vary together. Therefore the presence of any one is a sufficient condition for establishing the existence of the glass ceiling inequality.

Thus any gender inequality at the workplace is ipso facto not a glass ceiling inequality. Mere presence of fewer women at inception in a profession is not a sign of glass ceiling. Women are entering the IT industry at a reduced number than men. Of the engineering graduates only a third are women. This is gender inequality and inequality of or inequity in access and opportunity, but if women and men differ in their career chances and these disparities show increased incidence over the course of careers then that is glass ceiling in operation.
Description of the Sample

The sample selected is from IT companies in Bangalore and Mysore. Effort has been made to cover a spectrum of firms of varying employee strengths. The IT boom saw a proliferation of small and proprietary and start-up companies which are doing well in terms of revenue. A total of 510 data\(^2\) have been analysed. Of these 273 i.e. 53.5\% are women employees and 237 or 46.5\% are men. Figure 5.1 shows the numeric distribution of sample according to gender.

Empirically though in the IT industry, only an estimated 30\% of the actual workforce\(^3\) on the field is of women. In that sense this is a sample biased by 384\% or 3.84 times in favour of women. So whatever our statistics reveal on any of the indices pertaining to glass ceiling like situation we have to reduce the figure\(^4\) to 26\% of the actual figures in the case of women to arrive at a more vivid reflection of reality. If for instance there are 10 women in senior positions in the sample then the actual

\[
\frac{273}{237} \times \frac{1}{0.3} = 3.84 \text{ or } \frac{100}{3.84} = 26.04\%
\]

2 A sample of 510 IT employees has been taken. In addition to this for this research 104 engineering students have also been surveyed the details of which are presented in chapter 7.

3 This average figure has been obtained from NASSCOM data, Catalyst, Monster.com, and Annual Reports of companies and press reports all of which concur that 30\% of the Indian IT workforce is of women.

4 Actual survey consists of 273 women and 237 men. If the number of women has to be reduced to 30\% as is the actual industry ratio of women employees then this implies that effectively only a fourth of the women or some 26\% can be reckoned as representing the actual ground situation. [\(\frac{(273/237)\times(1/0.3)}{3.84} = 3.84\text{ or } 100/3.84 = 26.04\%\)]
industry statistics would be less than 3 women in the same total population. This explanation is necessitated to bring out the sharpness of the gender disparity to the disadvantage of the women.

It needs to be mentioned that despite this relative preponderance of women in the sample the data reveal glaring gender disparity on all the objective criteria for evaluating the glass ceiling inequality. What was truly disconcerting was that even a sample so overwhelmingly favourable in terms of representation of women showed such manifest glass ceiling effects even without having to reduce to actual industry ratios. If this sample had been taken in the same proportion of women as actual industry statistics the results would have been even more starkly indicting. But the purpose of this research is more to further the academic understanding of glass ceiling, to examine the existence of the glass ceiling for women based on such understanding and to ascertain the underlying sociological causes for the phenomenon. The research is not meant to give fuel to an activist agenda. It also does not bear a manifesto for women to win at the workplace except in a rather abstract sense. However the results do reveal that the entire media glare, allegations of unfair treatment of women in the workplace and the activism so generated are all eminently justified. If however, the findings contained in this thesis contribute in some measure towards the women’s cause one shall be truly gratified.

It is necessary to point out that since glass ceiling for women can be understood clearly only in comparative assessment with men it was needed to include both men and women in the sample. This is also necessitated in the interest of objectivity. It became important to conduct interviews with men also to find out whether indeed they are harbouring or acting upon any biases towards their female co-workers. Yet even though men outnumber the women in the industry, I have included more women in the sample with the research interest in mind. This has been done in order to conduct a detailed inquiry of the situation of women in the industry for the purpose of causal analysis. Furthermore, I wished to talk to the women and glean their mind. The women’s narratives explicitly and implicitly form an important element of the overall summation. An interesting occurrence that happened while conducting survey was that women were more willing participants. Many men thought that since the title of the thesis somehow conveyed a sense of it being about women they need not participate in the survey. However, from the point of view of this research it was
necessary to know the opinions of both men and women on the various aspects pertaining to their careers. Hence effort was made to ensure participation of male executives also. As explained in Chapter 4, the sample grew purposively through network analysis. It was allowed to expand of its own accord within the ambit of the parameters set by me in the exigencies of the research. In that sense not only is it a highly representative sample in terms of gender ratio, by including more women in the survey than the men any aspersions of sampling bias in order to exemplify inequality have been thereby effectively dispelled. What therefore makes the findings even more emphatic is the fact that a sample numerically so overwhelmingly tilted in the favour of women revealed such a significant glass ceiling inequality. Figure 5.2 shows the percentage distribution of the sample by gender.

Figure 5.2

<table>
<thead>
<tr>
<th>Percent</th>
<th>42.0</th>
<th>44.0</th>
<th>46.0</th>
<th>48.0</th>
<th>50.0</th>
<th>52.0</th>
<th>54.0</th>
<th>56.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender Distribution of Sample</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>53.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>46.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 5.3 gives a clearer picture of the study sample by showing the percentage comparison of actual empirical ratio i.e. ratio of men and women in the IT workforce with the gender ratio of the sample.
As already mentioned field work was conducted in two cities Bangalore and Mysore. Of the total 510 employees in the sample 370 are from Mysore and 140 from Bangalore. Figure 5.4 shows the city-wise sample.

In terms of marital status of the respondents 65% are single and the remaining 35% are married. Within the respective genders 35% women are married and 65% are single. Among men also 35% of the men are married and the remaining 65% are
single. Figure 5.5 shows the percentage distribution of married and single in the survey sample overall.

![Figure 5.5](image_url)

Figure 5.5 shows the percentage distribution of married and single by gender in the survey sample.

![Figure 5.6](image_url)

Figure 5.6 shows the percentage distribution of married and single by gender in the survey sample.

With regard to the socio-economic background of the sample, in terms of class background bulk of the population i.e. 94.3% described themselves as belonging to the ‘middle class’, ranging from lower to upper middle class and about 5.7% claimed
to belong to the ‘upper class’. The class grouping of population is based on the respondents’ self-perception of their socioeconomic status based on parameters provided such as salary and purchasing power. Figure 5.7 and 5.8 show the social class distribution of the sample.

Figure 5.7

Figure 5.8

Among the genders 98.5% of the women are from middle class and 99.2% of the men are from middle class. Figure 5.9 shows the social class distribution of the sample by gender.
As we can see from the above data majority of the respondents belong to the middle class. There is no significant difference between the genders in terms of their social class background.

As sociologist Satish Deshpande has pointed out the term middle class itself is a misnomer. The self-description, ‘middle class’ are nowhere near the middle of the economic pyramid rather they are closer to its top (Deshpande, 2003). The so called middle class of IT professionals is actually the affluent class of urban India which is in fact a very small minority of the Indian population. The real middle group is actually the poor but it has become fashionable in public discourse for the rich to describe themselves as middle classes modelling themselves on the western paradigm. This again is a paradox of contemporary India that the affluence generated by the IT sector serves to further intensify.

In terms of background, rural or urban, the sample almost in its entirety described itself as urban. Since IT industry is notably urban based and so are institutes of technology and management the respondents had spent a large share of their life in an urban milieu and hence chose to think of themselves as urban. But what was truly disconcerting was the underrepresentation of castes placed lower down in the social hierarchy in management positions in the sector. Along with gender dominance the most visible inequality was the numerical dominance of the ‘upper castes’ in engineering and technology jobs. Since there are no caste based reservations in jobs in
the IT sector the employees tend to assume a ‘casteless’ identity. The few women that one was able to identify and speak to also rationalised the situation as that many of their contemporaries had opted for jobs in the government and public sector. Even if that were to be true this asymmetry is a cause for concern and calls for deeper investigation through future research.

Glass Ceiling Analysis

The following section contains the analysis of data in order to examine for the existence of the glass ceiling. The analysis of glass ceiling has been done on the basis of the objective criteria set forth for establishing the presence of glass ceiling. Glass ceiling here as elucidated in the foregoing discussion, is sociologically taken to be understood as a social fact. We see the presence of the glass ceiling inequality in operation through observable indices establishing thereby objective criteria for ascertaining the presence of the phenomenon i.e. by examining the number of women in different age and organisational levels of the workforce, level of job attained commensurate with educational qualifications, and the salary drawn.

The Number of Women

If we look at our first criterion for establishing the existence of a glass ceiling, it is to do with a progressive decline in the number of women as compared to men as one goes up the organisational ladder. The premise of organisational mobility is that as one advances in age one has usually served for longer period in one or more organisation and has or would hence have acquired greater seniority of position. An analysis of the age wise distribution of the survey population shows that there is a markedly fewer number of women in the higher age groups. Figure 5.10 and 5.11 shows the sheer age distribution of the survey sample.
Figure 5.10

Female

- <25 years
- 25-29 years
- 30-39 years
- 40-49 years
- >50 years

Female %

- <25 years: 37.4%
- 25-29 years: 39.9%
- 30-39 years: 19.4%
- 40-49 years: 2.2%
- >50 years: 1.1%

Figure 5.11

Male

- <25 years
- 25-29 years
- 30-39 years
- 40-49 years
- >50 years

Male %

- <25 years: 26.2%
- 25-29 years: 36.7%
- 30-39 years: 25.3%
- 40-49 years: 9.3%
- >50 years: 2.5%

Figure 5.12 shows the age wise comparison of the gender distribution of the sample.

Figure 5.12

Age wise Comparison of Gender Distribution of Sample

<table>
<thead>
<tr>
<th>Percent</th>
<th>&lt;25 years</th>
<th>25-29 years</th>
<th>30-39 years</th>
<th>40-49 years</th>
<th>&gt;50 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>37.4</td>
<td>39.9</td>
<td>19.4</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Male</td>
<td>26.2</td>
<td>36.7</td>
<td>25.3</td>
<td>9.3</td>
<td>2.5</td>
</tr>
</tbody>
</table>
For the purpose of analysis throughout the research the population has been categorised into three broad age groupings based on a certain rationale. These groups are - those under 30 years of age representing ‘generation Y’ (the yuppie generation), an intermediate age category of those up to 39 years and those above 40 years of age. Figure 5.13 shows the number of men and women in the three main age groups in the survey sample.

**Figure 5.13**

<table>
<thead>
<tr>
<th>Gender wise in Different Age Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers</td>
</tr>
<tr>
<td>&lt;29</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
</tbody>
</table>

It can be seen from the data that there is almost 96% decline in the number of women with age at the highest age group. The commensurate decline in number of men with age from the youngest to the highest age group is 81%, a gap of 15%. Alternately stated 20% of the men continue in their jobs at senior ages while only 4% of the women do so. Going by the logical premise that personnel in the older age categories are most likely to occupy senior job levels this situation calls for serious thought. While it is true that in any organisational pyramid there are indeed a greater number of personnel at the base with numbers gradually decreasing as one reaches the top up to the point where there is only one chief executive officer, what is thought provoking is the dramatic fall in the number of women compared to that of the men.

Given also that the sample constitutes a higher number of women than men this decline in the number of women becomes even more intensified. This further implies that if one had retained a sample as per the industry demographic of only 30% women workforce overall then at same rate of decline we would have been left with virtually no representation of women at higher age groups. Effectively speaking then women are practically annihilated at the top in any organisation.
Now relative to the number of men at each level, i.e. ratio of men to women at each level that represents the gender gap at each age level shows the real picture even more clearly. Figure 5.14 graphically represents age wise decline in ratio of women and the simultaneous increase in the ratio of men with age in the sample. It may be noted that the female percentage with respect to men was 58.6 at start and declined to 24.3 in the age group of more than 40 years. The men likewise registered an increase from 41.4% to 75.7% as the figure shows.

**Figure 5.14**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;29</td>
<td>58.6</td>
<td>41.4</td>
</tr>
<tr>
<td>30-39</td>
<td>46.9</td>
<td>53.1</td>
</tr>
<tr>
<td>&gt;40</td>
<td>24.3</td>
<td>75.7</td>
</tr>
</tbody>
</table>

For further clarity of the situation Figure 5.15 shows the age wise sample of women projected in the form of sex ratio per thousand males.

**Figure 5.15**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;29</td>
<td>1416</td>
<td>1000</td>
</tr>
<tr>
<td>30-39</td>
<td>883</td>
<td>1000</td>
</tr>
<tr>
<td>&gt;40</td>
<td>321</td>
<td>1000</td>
</tr>
</tbody>
</table>

It can be seen from the ratio representation depicted that there is a widening gap between the number of women and men as one advances in age. These ratios only
signify age related numerical decline in women. As we analyse the data further on the specific aspect of occupational mobility the situation is revealed with greater sharpness.

The first qualification of glass ceiling inequality in our definitional construct of the glass ceiling is to do with the numerical decline of women with tenure of service. Given the premise of logic that at relatively senior levels barring a certain amount of lateral entry personnel would undoubtedly be advancing in age, this age related decline is symptomatic of the presence of glass ceiling. Furthermore, this decline of the number of women is accompanied by a marked increase in the proportion of men with respect to the women in each successive generational stage.

It would however bear qualifying again that the study is not a longitudinal study. Some of the surveyed individuals were periodically re-interviewed during the three year period but the questionnaire data is synchronous over the period of field work. In that sense one has not charted the career course of the same set of persons over an extended period to find out whether out of those very persons over a period of time the men made gains in salary and career advancement over and beyond their female counterparts. Glass ceiling considered as a social fact repudiates the need for and desirability of such an investigation. However this data can lay the foundation for such an ambitious venture and a core group selected can constitute the data base for a future study of such magnitude and density should there be intention to pursue such analysis.

Educational Qualifications

In terms of educational qualifications the sample of 510 employees has been divided into two broad categories – all those with BE, B.Tech. and equivalent degrees are considered as graduates and those with masters degrees M.Tech., MBA, Ph.D. or equivalent were considered as one category as post graduates and above. The educational qualifications profile of sample shows that 57% of the graduates are women and 43% men. Of those with post graduate degrees 46% are women and 54% are men. Figure 5.16 shows distribution of educational qualifications in the sample.
If we look at the same gender wise, of 273 women, 72% are having graduate degrees and 28% are postgraduates. Among the men (237) 62% are graduates and over 38% are post graduates. Figure 5.17 shows the comparative overview of male-female educational qualifications in the sample.

Now as per the definitional understanding of glass ceiling we have to analyse the job levels attained by men and women graduates and those attained by postgraduates and above. In this study job designations have been understood through three main levels - junior management, middle management and senior management.
Figure 5.18 shows that only 0.5% of women graduates reach senior management whereas 8% of male graduates are able to reach senior management.

**Figure 5.18**

A male with a graduate degree has a 16 times greater chance to attain a senior management position as compared to a female engineering graduate. Similarly we see as depicted in figure 5.19, among those with post graduate and above qualifications only 2.6% of the women have been able to become senior managers while 10.1% men postgraduates become senior managers. A male manager with a post-graduation degree has a 4 times higher chance of reaching senior manager’s level than a woman post graduate.

**Figure 5.19**
Figure 5.20 represents the same graphically. It can be seen from the figure how the career graph of a woman manager has a promising start but registers a fall as one ascends the organisational ladder and throughout thereafter it consistently remains below that of a male manager.

These data show clearly that men with similar qualifications have a significantly higher chance of attaining a senior job level as stipulated in our criterion for establishing the existence of the glass ceiling as a social fact.

Length of Work Experience

In the logical order of progression the next aspect under consideration is work experience. Our definition of glass ceiling as a social fact does not specify work experience as a determining characteristic criterion for identifying glass ceiling. The reason for this is not far to seek. ‘Experience’, by the very meaning of the word pertains to a subjective relationship with a phenomenon, individual, group or situation – in the present context to one’s work – is therefore a measure of quality in addition to quantity. Work experience is quantitatively defined through its duration and qualitatively assessed through its range and depth. A person with greater exposure to challenging assignments, leadership roles or overseas postings may for instance be seen as having a larger experience than another with that of similar or even longer duration but relatively static nature. Therefore tenure at a job by itself may not be an overriding criterion for career advancement. It bears mention here that the manner of
disbursement of quality work exposure may be discriminatory - a situation that shall be discussed in detail in the chapter that follows.

As the length of experience is imbued with subjective overtones it cannot be used as a primary criterion for establishing the glass ceiling as a social fact. However it is a reliable indicator for deducing the presence of workplace disparity. Figure 5.21 shows the data with respect to the length of work experience of the employees.

**Figure 5.21**

<table>
<thead>
<tr>
<th>Work Experience</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5Years</td>
<td>Female 188, Male 125</td>
</tr>
<tr>
<td>5 to 10 Years</td>
<td>Female 56, Male 53</td>
</tr>
<tr>
<td>10 to 15 Years</td>
<td>Female 20, Male 29</td>
</tr>
<tr>
<td>15 to 20 Years</td>
<td>Female 6, Male 16</td>
</tr>
<tr>
<td>&gt;20 Years</td>
<td>Female 3, Male 14</td>
</tr>
</tbody>
</table>

From the data we can see that only 3 women out of a sample of 273 women have more than 20 years work experience i.e. 1% while 6% of the men have 20 years or more of work experience. Only 6 women i.e. 2% have a total of more than 15 years of job experience. By any yardstick to reach a really senior position in any secular non-family oriented organisation a manager should have some 15 productive years behind him. This poor representation of women in the higher job experience categories is reflective of their poor representation at higher job levels. It bears reiterating that reaching a coveted organisational position is not purely a function of work experience alone. It would certainly depend on a host of factors such as work performance, results delivered, market worthiness, educational qualifications, range of work exposure and several non-descriptive subjective dimensions. But the situation does become clearer when one looks at these years of service in connection with the three main job levels. Figures 5.22, 5.23 and 5.24 show gender-wise comparison of years of work experience attained at the three identified job levels.
From the figures it can be seen that a total of 9 women more have than 15 years work experience all job levels taken together. Of these only one is a senior manager and 8 remain middle managers. Though the total number of women is 273 only 9 are able to last in their jobs beyond 15 years i.e. 3.3% and reach middling levels of hierarchy. While when we analyse the same for the men out of a sample of 237 we infer that 30 men have persisted in their careers over a period of more than 15 years. Of this half, that is, 15 are senior managers and 14 middle managers while only 1 has remained a junior manager. This shows that 50% of the men who serve in their jobs for more than 15 years have reached senior management positions and almost 50% reach middle levels. Of the total 16 people with more than 15 years of work experience who become senior managers only 1 is a woman. In terms of qualifications the lone woman senior manager is a graduate and 7 male senior managers are graduates and remaining 8 are post graduates.

Even on the face of it one can perceive that women are not receiving sufficient incentive by way of enhancements in job level in order to be able to tenaciously pursue their careers. Why women actually quit their jobs is the cumulative effect of a number of factors that are discussed in detail in the analysis of primary data pertaining to explaining the causes for glass ceiling, described in chapter 6 of this thesis. Figure 5.25 shows this comparison of job level attained at length of experience in relation to the educational qualifications of the incumbents.

**Figure 5.25**

<table>
<thead>
<tr>
<th>Gender wise Comparison of those with more than 15 Years of Experience in Senior Management Level by Educational Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
</tbody>
</table>

![Bar chart showing gender-wise comparison](chart.png)
This once again shows the severity of the disparity that women face. This glaring gender difference is a manifestation of glass ceiling even though it may not be a defining criterion for establishing the presence of a glass ceiling as a social fact, and by its inclusion as such one does not wish to take away from catholicity of the definition and its basic objective grounding. However this aspect of the data establishes the spirit of the glass ceiling metaphor in no less a manner than the other data presented in this chapter.

**Level of Position Attained**

The level of job reached is a consistent strand in any analysis of glass ceiling and impinges on the understanding of all other variables involved. The progressive decrease in number of women by job level in itself constitutes a sufficient condition to concede the presence of glass ceiling as a social fact. However, in this section we discuss the next criterion delineated that of the gender difference in occupational mobility. To the detriment of women this further confirms the findings. As aforementioned for the purpose of this research the job designations of the respondents have been collated in the form of three job level categories – junior management, middle management and senior management. Respondents were asked to state as to what job level out of the three they belonged. Table 5.1 shows the gender-wise comparison by level of position.

**Table 5.1: Gender-wise Comparison by Level of Position**

<table>
<thead>
<tr>
<th></th>
<th>Junior Management</th>
<th>Middle Management</th>
<th>Senior Management</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>177</td>
<td>93</td>
<td>3</td>
<td>273</td>
</tr>
<tr>
<td>Male</td>
<td>120</td>
<td>96</td>
<td>21</td>
<td>237</td>
</tr>
<tr>
<td>Total</td>
<td>297</td>
<td>189</td>
<td>24</td>
<td>510</td>
</tr>
</tbody>
</table>

It can be seen from the data that out of total 24 senior managers only 3 are women and the rest 21 are men. Out of the three women senior managers one is a graduate and two have post graduate qualifications. Out of the 21 male senior managers 12 have only graduation degrees and 9 are post graduates. Looking at this data in terms of representation of women in senior management out of the total surveyed women it can be seen that out of total 273 women only 3 are there in senior manager level whereas out of 237 men 21 have reached senior position. Only 1.09% of the women have reached senior level in comparison to 8.9% men who have reached
the level with similar or lesser qualifications. Men are reaching senior management positions eight times more than the women.

If we take the number of personnel in junior management as our baseline going by the premise that a senior manager would have commenced his career as a junior level employee then we see that of 177 women in the junior management level 93 have potential to be middle level managers i.e. 52.5%. For the men 96 out of 120 managers have the potential to become middle managers i.e. 80% resulting in a gender differential of 27.5% in favour of men. As we can see from the data only 3.2% of the middle level women managers can become senior managers while 22% of male middle managers become senior managers resulting in a gender gap of 19%. In the case of junior management level of the women only 3 have the potential to be promoted as senior manager from junior manager. In comparison out of 120 men junior managers 21 have the potential to be promoted as senior managers. If we reckon women and men to have been recruited in equal numbers say 100 each for the purpose of this analysis then as we can see only 1.7% of the women have the potential to reach senior level and 17.5% of men have the potential to reach the senior level from junior positions. So the probability of a male employee in a junior position to be promoted to the senior level is ten times higher than that of a female. In industry terms as the ratio of employees is of 30:70, women to men, then the probability of a woman junior being promoted to senior level is 0.51 out of 30, and for men this is 12.25 men out of 70. In other words all else remaining more or less the same a male junior manager has a 24 times greater probability of promotion to senior levels than a woman. Table 5.2 shows the comparative aspects of occupational mobility of women and men managers and the same is depicted with industry ratio through figure 5.26 and 5.27.

Table 5.2: Comparative Occupational Mobility of Women and Men Managers

<table>
<thead>
<tr>
<th></th>
<th>Junior</th>
<th>Middle</th>
<th>Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>100.0</td>
<td>52.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Male</td>
<td>100.0</td>
<td>80.0</td>
<td>17.5</td>
</tr>
</tbody>
</table>
Figure 5.26

![Graph showing Promotion Probability with Industry Ratio of Recruitment for Junior and Senior levels for both Female and Male](image)

Figure 5.27

![Graph showing Probability of Promotion with Industry Ratio of Recruitment - By Three Job Levels for Junior, Middle, and Senior levels for both Female and Male](image)

This visibly is the **Glass Escalator** component of glass ceiling in operation that the literature review spoke about. Men managers are able to and rise much faster and higher than their equally qualified women colleagues.

**Salary**

The salary data only reinforce the findings on these discussed criteria. In the younger age group of those under 29 years the average salary of women is Rs. 9.03 lakhs per annum. The men in the same category are paid an average salary of Rs. 9.66 lakhs amounting to a nominal difference of 0.64 lakhs or 7% in the favour of the men. As we can see from these statistics in the younger age group men and women start with more or less similar salaries. As they grow older in the industry the average
salary of a female in the age group of 30-39 years is 12.45 lakhs rupees. For men in this age category the average salary per annum is 16.08 lakhs creating a salary differential of 3.63 lakhs i.e. 29.15% to the benefit of men. In the age category of those above 40 years the average salary of a woman is 13.33 lakhs and that for a man is 17.14 lakhs leading to a salary differential of Rs. 3.81 lakhs or 28.6% in favour of the men. In other words women in the technology sector seem to start their careers on an equal footing with men but as both men and women advance in age the gender-wage gap begins to show up with a decisive certainty to the advantage of men in the sector. Figure 5.28 shows comparative average salary of male and female employees with age.

**Figure 5.28**

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Female</th>
<th>Male</th>
<th>Difference</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;29</td>
<td>9.03</td>
<td>9.66</td>
<td>0.64</td>
<td>7.04</td>
</tr>
<tr>
<td>30-39 years</td>
<td>12.45</td>
<td>16.08</td>
<td>3.63</td>
<td>29.15</td>
</tr>
<tr>
<td>&gt;40</td>
<td>13.33</td>
<td>17.14</td>
<td>3.81</td>
<td>28.57</td>
</tr>
</tbody>
</table>

These salary figures may appear rather modest in comparison to popular perception on IT salary scales. People in the sector are often given non-monetary perks and sometimes stock options that augment their salaries. Furthermore, people as a rule are circumspect in the matter of divulging salary and other wealth details and despite all assurances of confidentiality most are evasive on salary related revelations. These figures are the net salary income drawn by the employees in Mysore and Bangalore as per the surveyed data. Still whatever may be one’s response to the absolute value of the salary the element of significance for our research is not the sheer salary figures but the consistency in the wage gap by gender.

If we were to view this same statistic in terms of salary for the level of position attained comparing it by gender, one arrives at the following findings. Figure
5.29 shows the comparative salaries earned by men and women in different age and organisational level categories.

**Figure 5.29**

<table>
<thead>
<tr>
<th>Salary Rs. In Lakhs</th>
<th>JM</th>
<th>MM</th>
<th>SM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>8.8</td>
<td>11.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Male</td>
<td>9.3</td>
<td>14.5</td>
<td>18.3</td>
</tr>
<tr>
<td>Difference</td>
<td>0.5</td>
<td>2.8</td>
<td>5.0</td>
</tr>
<tr>
<td>% Difference</td>
<td>5.2</td>
<td>23.5</td>
<td>37.5</td>
</tr>
</tbody>
</table>

The average salary per annum of a woman in junior management is Rs. 8.8 lakhs and that of a male is 9.3 lakhs. If we compare the salaries of women in junior management with that of men the difference is of 0.5 lakhs or 5.2% in favour of the men. When we examine the data further, in middle management the average salary of a woman is Rs. 11.7 lakhs. The same for a male middle manager is Rs. 14.5 lakhs, a difference of 2.8 lakhs. The men on average earn 23.5% more salary than their female counterparts in middle management positions. In senior management at the very top of the organisational ladder the woman earns an average salary of Rs. 13.3 lakhs which is 37.5% lower than the average salary of a man at that same level drawing an average salary of Rs. 18.3 lakhs the difference being of 5.0 lakhs. This once again confirms the finding that though women start their technology careers on an equal footing with men as they progress in their careers they are in fact rapidly overtaken by the men. The salary difference between women and men increases from 5.29% in junior levels to 37.5% at the senior, amounting to a differential of 32.2% in favour of the men.

Indeed, the pay gap measures only the difference in average earnings between all men and all women; it is a reflection of pay bias or the external manifestation of the same. Reasons for pay biases need to be explored further.
Perusal of Company Annual Reports

An analysis of the Annual Reports of some well-known IT companies over the past few years completes the picture. It also lends credence to the findings contained in this chapter. There is immense disparity in the ratio of women to men at the senior levels. For instance, the Annual Report for the year 2013 of a top IT firm posted on the Web provides a list of “key management Personnel” comprising some twenty odd members of which only two are women (Infosys Annual Report, 2013-14). The Annual Report of another carries a caption what it calls “dimensions of diversity” which declares that 32% of the employees are women among others (TCS Annual Report, 2012-13). (Of course when these corporates talk of diversities they also mean in terms of nationalities, as well over 100 nationalities find representation in these global corporations.) According to the Annual Report of another top IT company for 2013-14, the percentage of women employees in the year 2014 is 30.7%. This is an increase of 0.7% from the previous year (WIPRO Annual Report, 2013-14). There are very few women directors and this seems to be the standard across the industry as even a cursory look at their annual reports will reveal.

The Companies Act, 2013 which was passed by the Parliament and received the assent of the President of India on 29th August, 2013 makes it mandatory that every company have at least one woman on its board. The Companies Act consolidates and amends the law relating to companies. The Act was notified in the Official Gazette in August, 2013. Some of the provisions of the Act have been implemented by a notification published in September, 2013. The provisions of Companies Act, 1956 are also still in force. According to section 149 of the Act with respect to the Board of Directors “(1) Every company shall have a Board of Directors consisting of individuals as directors and shall have — (a) a minimum number of three Directors in the case of a public company, two Directors in the case of a private company, and one Director in the case of a One Person Company; and (b) a maximum of fifteen Directors: Provided that a company may appoint more than fifteen Directors after passing a special resolution: Provided further that such class or classes of companies as may be prescribed, shall have at least one woman Director” (Government of India, Ministry of Corporate Affairs, The Companies Act, 2013, Section 149).
This provision by the government may appear mere tokenism to some. But as we can see from the field data that this is indeed a means of ensuring that at least one woman’s presence is assured at the highest level through such statutory measures. In the recent census of women board of directors conducted by Catalyst (2014 Catalyst Census) as of October 2014 there are only 9.5% women in the boards of stock index companies in India (catalyst.org, 2014b). According to still recent data from a global study by the ILO published in January 2015 as per current year data in India only 4% of the CEOs of stock market listed companies are women and less than 5% of the board seats are held by women (ILO, 2015). In the light of all this one can truly appreciate the need for such legislation.

Summary of Findings and Conclusion

The data collected for the study has thus been systematically analysed to (a) find out if there is gender inequality in the IT sector and if so what is the nature of that inequality and (b) what are the possible causes of this situation. The first step to understanding the nature of the prevailing inequality would be to define glass ceiling itself in suitable fashion as a concept fit for analysis. Hence in this chapter the concept of glass ceiling has been sociologically stated as a social fact. As a social fact a glass ceiling can be said to exist when there are progressively fewer women than men at each successive level in the organisational hierarchy given that women and men so considered have more or less similar levels of educational attainment; and when this gap between the number of women and men widens at each successive level; when men experience greater occupational mobility and earn higher salaries than women at all levels of job.

To sum up the findings reveal a sharp decline in the number of women from junior level to the senior level. Only 1.7% of the women make it senior position in comparison to 17.3% of the men who do so. A male manager with a graduate degree has a 16 times greater chance to attain a senior management position as compared to a female engineering graduate. A male manager with a post-graduation degree has a 4 times higher chance of reaching senior manager’s level than a woman post graduate. Men have at least 8 times greater probability of promotion to senior levels than women with similar qualifications. In the younger age group as they are recruited men and women start with more or less similar salaries. The salary difference between
women and men increases from 5.29% in junior levels to 37.5% at the senior, amounting to an increase of 32.2% in favour of the men.

All the criteria for identifying glass ceiling are hereby conclusively met by the data beyond any reasonable doubt thereby enabling one through this study to establish the existence of glass ceiling for women in the IT sector in India. The study has suggested and tested a sociological definition of glass ceiling and then at the empirical level the study has tested for the existence of the glass ceiling inequality for women in the IT sector through field research in Karnataka, and analysis of the data so procured. By definition we have been able to establish the presence of glass ceiling inequality as a social fact through externally observable objective criteria – and that this glass ceiling exists in its severe form; further it is an inequality which gets worse compounded when the sample is corrected to reflect the proportion of male and female employees in the IT industry.

The outcomes of this research are consistent with the prevailing statistics periodically released to the public by research agencies and other stakeholders. These findings are in line with recent surveys conducted by other agencies. According to the “Monster Salary Index Indian IT Sector Report 2014”, brought out by the website monsterindia.com only 30% of the total IT sector workforce in India is women and these women face a gender pay gap of 29%. Men get promoted faster than women. Only 36% of female employees are promoted to supervisory rank while 52% of male employees get promoted (Deccan Herald, July 25, 2014). According to the Global Wage Report 2014/15 of the ILO released in December 2014, the gender pay gap has widened for higher-earning women. The report says that “Women’s average wages are between 4 to 36 per cent less than men’s but the gap widens in absolute terms for higher-earning women” (ILO, 2014). The report calls for “legislation to provide the right to equal remuneration for work of equal value in line with the Equal Remuneration Convention, 1951 (No. 100) and judicial access to claim this right” (ibid.).

The literature review contained in Chapter 2 had strongly suggested towards workplace inequality. But bulk of the literature is also to do with guidelines for remedying it. This research undoubtedly corroborates that there is gender inequality but it also clarifies that this gender inequality is indeed sociologically speaking a glass
ceiling inequality when defined as a social fact. And if this is a social fact then the understanding of this has to be derived from social causes. The underlying cause for a social fact has to be found among other social facts - indeed from society itself. Individual personality traits, personality development, self-help guides and the like can at best act as morale boosters but do not constitute the basis for explaining glass ceiling inequality. The following chapter explores the likely causes of the phenomenon of the glass ceiling.
REFERENCES


