PAKISTANI WOMEN IN
TECHNOLOGY

A P@SHA study on the role of women in technology as employees, managers and contributors
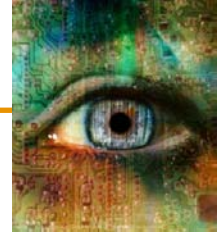
May, 2012

Contents

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EXECUTIVE SUMMARY

A study was conducted by P@SHA to document the role of women in the IT industry of Pakistan. The aim was to get a clearer insight into the participation levels of women in the IT industry, to gauge how these levels as well as retention may be impacted by HR policies and benefits offered by companies and to understand the levels of satisfaction with regard to benefits and opportunities available for career advancement.

The study was based on two parallel surveys that targeted the HR departments at one level and simultaneously approached individual women at the other level, in over 400 P@SHA companies. The analysis was derived from the responses received from 49 companies and 124 individuals.

Women represent 14% of the IT workforce and 13% of IT managers, numbers which coincide with the national average women labor force. Companies in the Education, Internet Services and Oil & Gas (Energy) industries seem most conducive to female IT employees.

37% of women polled were in mid-career level positions at their companies whereas only 13% of women were in Senior Management positions. It was observed that women tend to encounter a glass ceiling when they are in their mid-careers. Despite the years of experience gained a greater proportion of these women continued to persist in mid-level roles with only a fraction transitioning to senior management positions. One reason considered was a company culture which allowed for discrimination in promotions between male and female colleagues. However, results show that women felt that they were appreciated and valued as much as their male counterparts, received equal opportunities to excel in highly visible projects, and were optimistic about their chances for promotion.

A significantly lower number of women have work experience that exceeded 7 years. This could be an indication of the leaky pipeline effect on retention of women in the IT workforce where women pursuing careers are at risk from life events that influence their participation decisions. Job mobility of women in IT tended to increase as they accumulated more years of work experience. However, loyalty towards the IT field seems high with many indicating that they would only consider leaving their current employment if they received a better opportunity within the IT industry.

Common HR benefits offered by companies are paid maternity leave, emergency leave and flexible work hours. There were companies polled who failed to offer paid maternity leave which is considered to be a basic HR benefit for women worldwide. Mentoring and training opportunities which are important tools for encouraging career advancement were not offered by many of the companies polled. Companies offering a higher number of benefits had a greater proportion of women on their workforce and there was a positive correlation between offering more benefits and the number of women in IT management.

A majority of women polled are satisfied with their work environments and believe that they are not harassed or less valued in comparison with their male colleagues. A significant proportion are not satisfied with work timings, citing long work days and insufficient time for fulfilling social and family responsibilities. Women recommended better HR benefit policies that addressed work timings – length and flexibility, transportation and day care facilities. They also recommended equal opportunities for training and advancement and a reduction in gender stereotyping of IT roles. The latter would ensure an atmosphere of mutual respect that would foster and support the development and growth of women participation in the IT workforce of the country.

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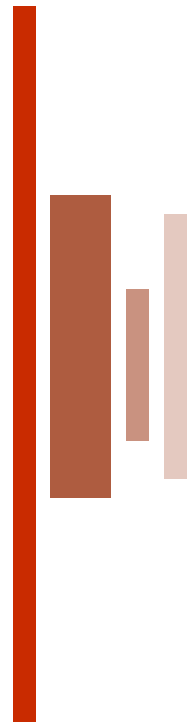
INTRODUCTION

Women constitute around 49% of the total population of Pakistan. However their participation in the overall labor force of the country remains low. This is due, in part, to their marginalization within public, private and professional spheres based on factors such as age, marital status, number of children, level of education achieved, household economic status, patriarchal family structures, customs and traditions in the areas where they reside.

Due to this marginalization and resultant low levels of economic participation, women in Pakistan represent only 14% of the total labor force according to the 1999-2000 Labor Force survey.

Compared to other countries in South Asia, such as Bangladesh (42%), Nepal (41%), India (32%), Bhutan (32%) and Sri Lanka (37%), the propotion of women in the workforce in Pakistan is the lowest.

Figure 1: Proportion of Women in Pakistan's Labor Force

Further, according to the South Asia Research Program's report "Women and Paid Work in Pakistan" the proportion of women in white collar jobs in non-traditional areas such as engineering, banking and law remains significantly low. For example, the report states that according to the Labor Force Survey 2003-2004, only 1.06% of the total distribution of employed people work in finance, insurance, real estate and business services and of those only 0.01%

As the IT industry would also be classified as a white collar job in a non-traditional area it was felt that it would be interesting to see what

Figure 2: Pakistan Vs. Other Asian Countries on Women in Labor Force

women participation was like in the IT workforce of the country. Would the results reflect the country average or would the IT industry fair better or worse in terms of women participation?

As there had been no formal research carried out in the area prior to this study, P@SHA undertook to conduct a survey to document the role and participation of women in technology in Pakistan. With this study PASHA aimed to gauge:

- The extent of women's participation in Pakistan's IT workforce
- The HR policies available to female employees at IT companies as well as IT departments of non-IT companies to encourage retention
- The levels of satisfaction that women in the IT industry face with regard to these HR policies and benefits
- The perception among women in the IT industry as to the opportunities available to them for career growth and advancement

We begin by documenting the methodology used in the survey. Next we present a summary of the data including a profile of the women IT workforce in Pakistan. We then analyze the representation of women in the total workforce, the IT departments and among IT managers of the companies polled. We then investigate the career development of women and reasons for any barriers to advancement; retention, mobility, rates of attrition and reasons for leaving existing employment; the impact of HR benefits on retention and career advancement. We conclude with concerns raised by women regarding work environments and their recommendations for improving retention and participation rates.
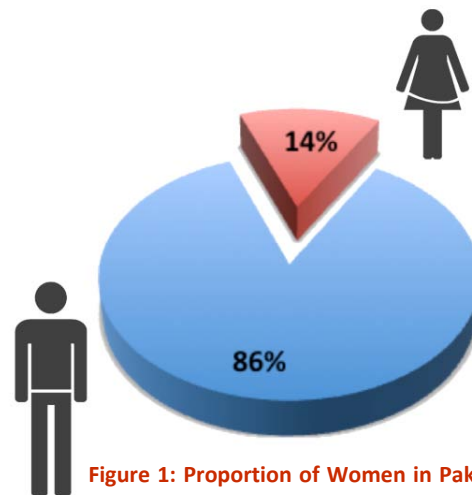
METHODOLOGY

The study was conducted by circulating two online surveys simultaneously:
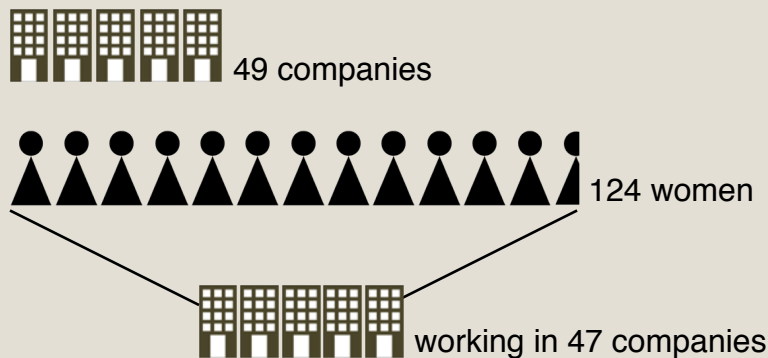
HR/ Company-based Survey

The first survey was circulated to companies, in particular the Human Resource (HR) departments and/ or their CEOs. The purpose was to gain a clearer insight into women working in the IT sector in Pakistan with a view towards reporting best practices and HR policies and benefits that encourage women to remain in or join the IT sector.

Women in IT/ Individual Employee-based Survey

A parallel survey was sent to obtain responses from female employees of these companies. These were to be completed by the employees on an individual basis. The purpose of this survey was to build a profile of women in technology such as their educational qualifications, work experience and salary brackets. The aim was also to understand their working environment better, including their degree of satisfaction with respect to the HR benefits and the opportunities for advancement available to them.

RESPONDENTS TO THE STUDY

49 companies

124 women

working in 47 companies

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RESPONDENT PROFILES

The surveys were rolled out to over 400 P@SHA companies. 49 companies responded to the HR survey whereas 124 women responded to the individual survey. The latter respondents represented 47 companies.

Industry-wise Representation

Across both surveys, responses were received from companies belonging to the following industries:

The highest represented companies were those from the Computer Software industry, comprising 60% of the total companies who responded. This was followed by responses from companies in the Education, BPO, Internet Services and Telecom industries. A list of participating companies is included at the end of the report.
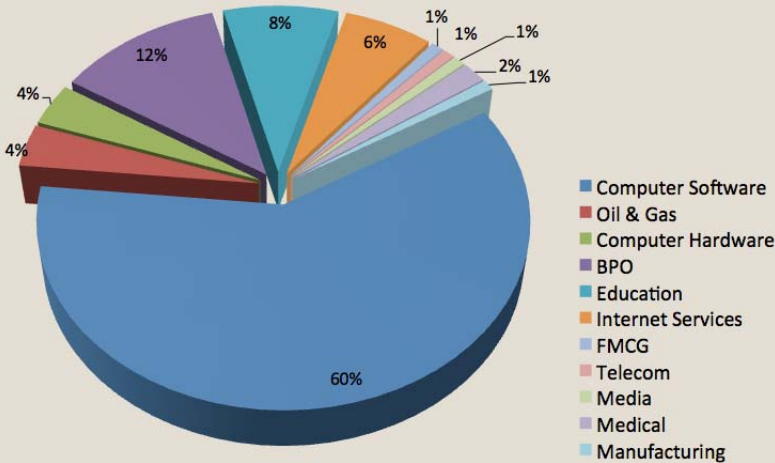

Figure 3: Representation of industries polled for the P@SHA Women in IT Survey

City-wise Representation

Across both surveys, responses were received from companies belonging to the following industries:

A total of nine cities in Pakistan were represented in the surveys. 28 companies had offices in more than one city. Among the respondents Karachi accounted for the largest share of offices with 38% of the total offices (taking into account multiple offices), followed by 31% of total offices located in Lahore and 26% located in Islamabad.
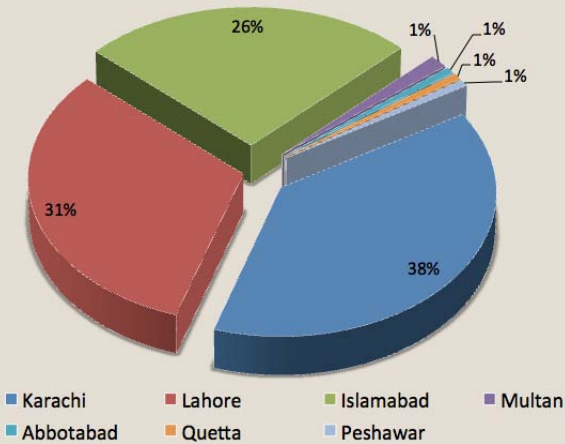

Figure 4: City-wise Breakup of the Companies Polled
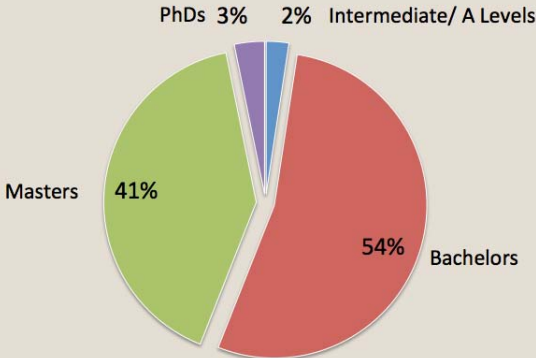
Profile of Women in the IT Industry

Education
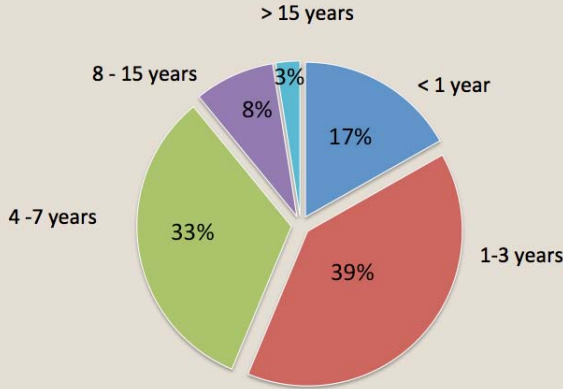

Figure 5: Distribution of Academic Degrees

- PhDs 3%
- Intermediate/ A Levels 2%
- Masters 41%
- Bachelors 54%

Work experience

Figure 6: Distribution of Work Experience

- > 15 years 3%
- 8 - 15 years 8%
- 4 -7 years 33%
- < 1 year 17%
- 1-3 years 39%

Career Distribution
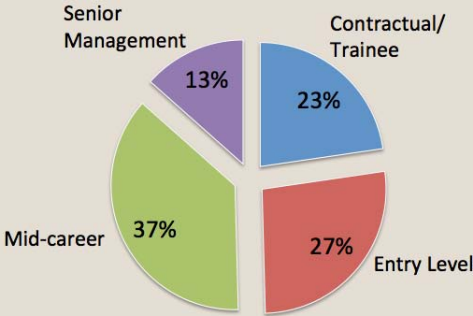
Figure 7: Current Career Level Distribution

- Senior Management 13%
- Contractual/ Trainee 23%
- Mid-career 37%
- Entry Level 27%
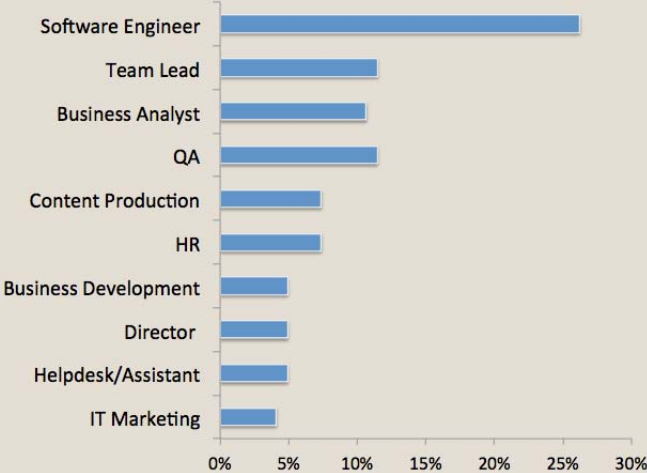
Figure 8: Job Title Distribution

- Software Engineer
- Team Lead
- Business Analyst
- QA
- Content Production
- HR
- Business Development
- Director
- Helpdesk/Assistant
- IT Marketing

Salary Distribution

Figure 9: Distribution of Salary

- < Rs 10 k
- Rs 10 k - Rs 35 k
- Rs 35 k - Rs 75 k
- Rs 75 k - Rs 100 k
- Rs 100 k- Rs 250 k
- > Rs 250 k

ANALYSIS: REPRESENTATION OF WOMEN IN THE IT WORKFORCE

Overall Representation of Women in IT

Of the 49 companies polled in the company survey, 14% of the total workforce in IT are women.

The total proportion of women working in all the companies polled was 28%. However, to determine the women participation among the 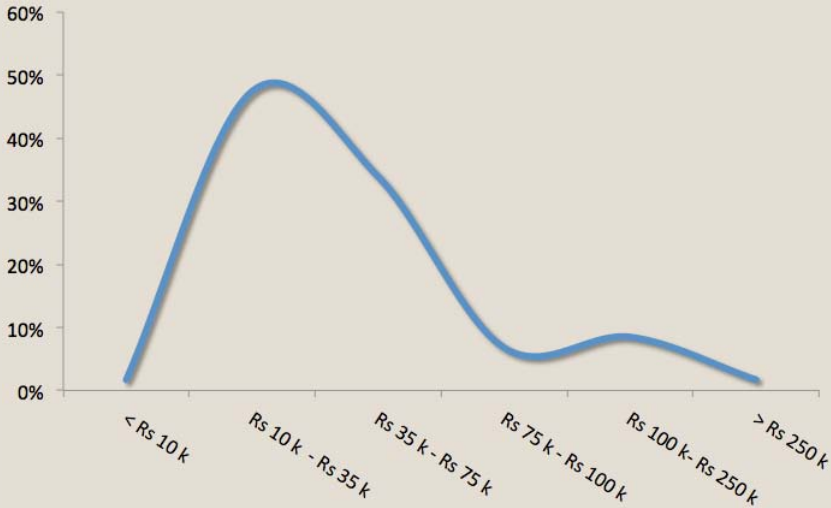IT workforce, respondent companies have been classified as either IT companies or non-IT companies with IT departments. The former comprise of companies in the Computer Software, Computer Hardware and Internet Services industries. The other companies fall in the purview of non-IT companies with IT departments.

In the case of IT companies, the entire workforce is considered as IT workforce, whereas for non-IT companies only the IT departments are considered as being part of the IT workforce. Based on this configuration, the percentage of IT workforce that are women is 14%.
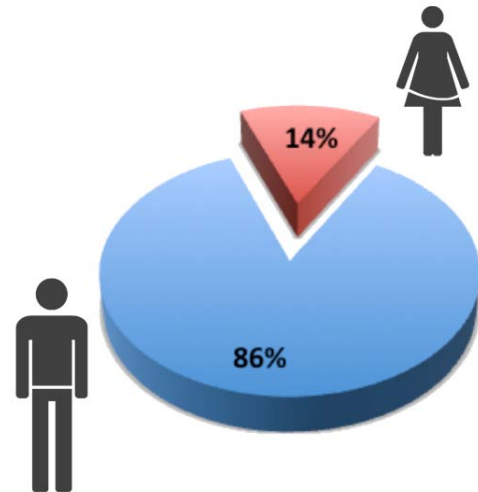

Figure 10: Representation of Women in the IT Workforce in Pakistan

Most Women-Friendly Industries for IT

Based on the company survey data, the most women-friendly companies among those polled belong to the Education industry where 24% of the IT workforce are women, the Internet Services and Oil & Gas industries with 20% female participation and the Computer Hardware industry with 17% woman IT workforce.

All of these industries have a larger proportion of women in the labor force as compared to the national average. BPOs and FMCGs fall much below the national average with 4% and 5% participation rates respectively whereas Computer Software companies have on average a women IT workforce of 13%.
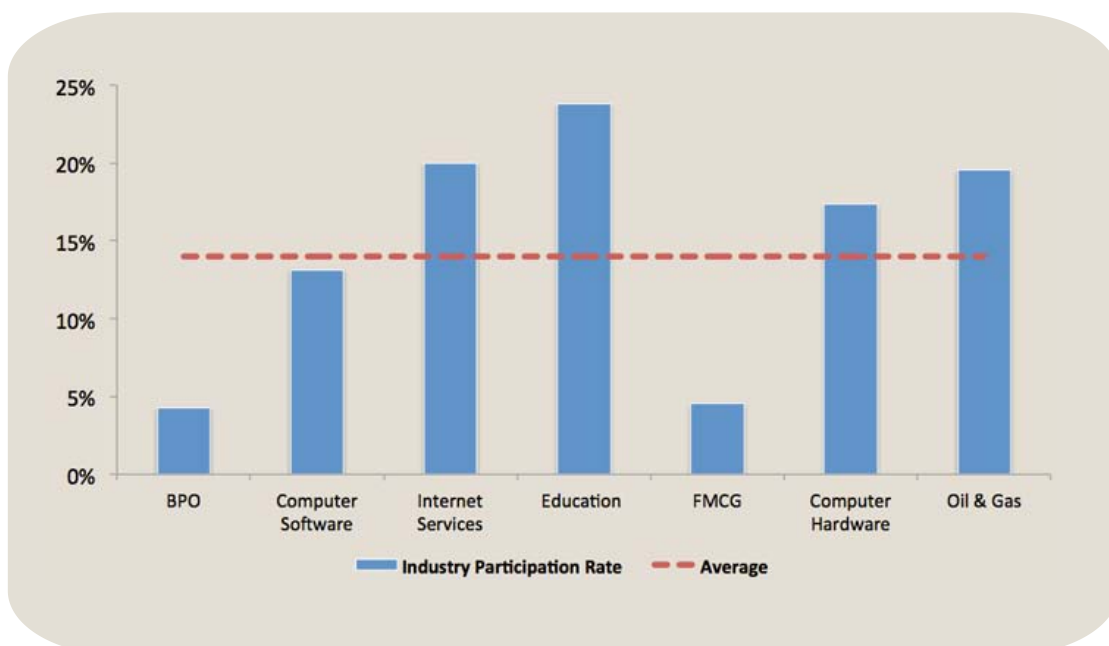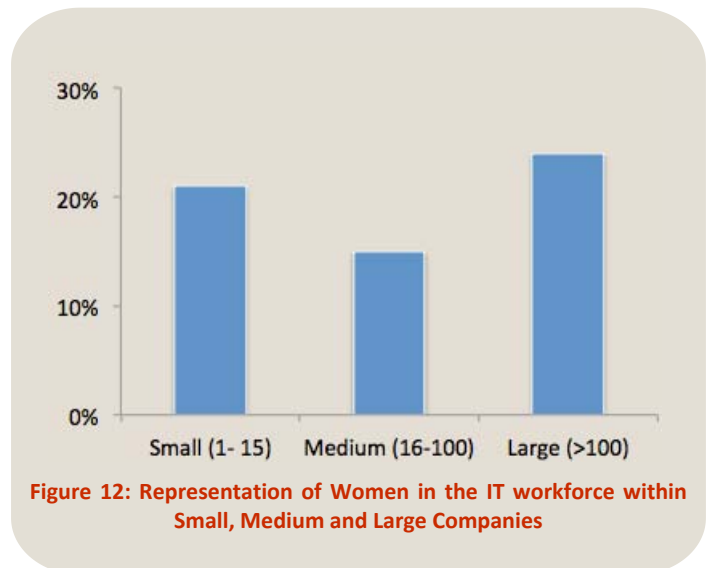

**Figure 11: Representation of Women in the Industries Polled**

Given that the ratio of Computer Software companies is the largest in the cohort studied, the lower representation of women in this industry drags down the overall ratio of the companies polled.

Female participation in IT is surprisingly the lowest in industries where the IT workforce is between 16 -100 (medium-sized companies). From an analysis of the 71 companies which participated, we found that companies with at most 15 IT employees and companies with greater than 100 IT employees fare better in terms of women participation. Small-sized companies (IT workforce ≤ 15) have 21% women on average, where as large-sized companies (IT workforce >100) have 24% women. Medium-sized companies reflect the overall women employment ratio of 14%.

Figure 12: Representation of Women in the IT workforce within Small, Medium and Large Companies

Representation of Women as IT Managers

The overall representation of women within the IT management of companies closely follows the overall representation of women in the IT sector at 13%. However, when we examine the women employment ratio among IT managers at the industry level it presents a different picture. In response to the survey question "How many women are IT managers in your company?", companies belonging to three of the industries, Internet Services, Computer Hardware companies and FMCGs, recorded zero representation of women in IT management. In contrast, companies belonging to the Education sector had the highest participation of females within their IT management, followed by Computer Software, BPOs and Oil & Gas companies.

Figure 13: Representation of Women in IT Management for Industries Polled

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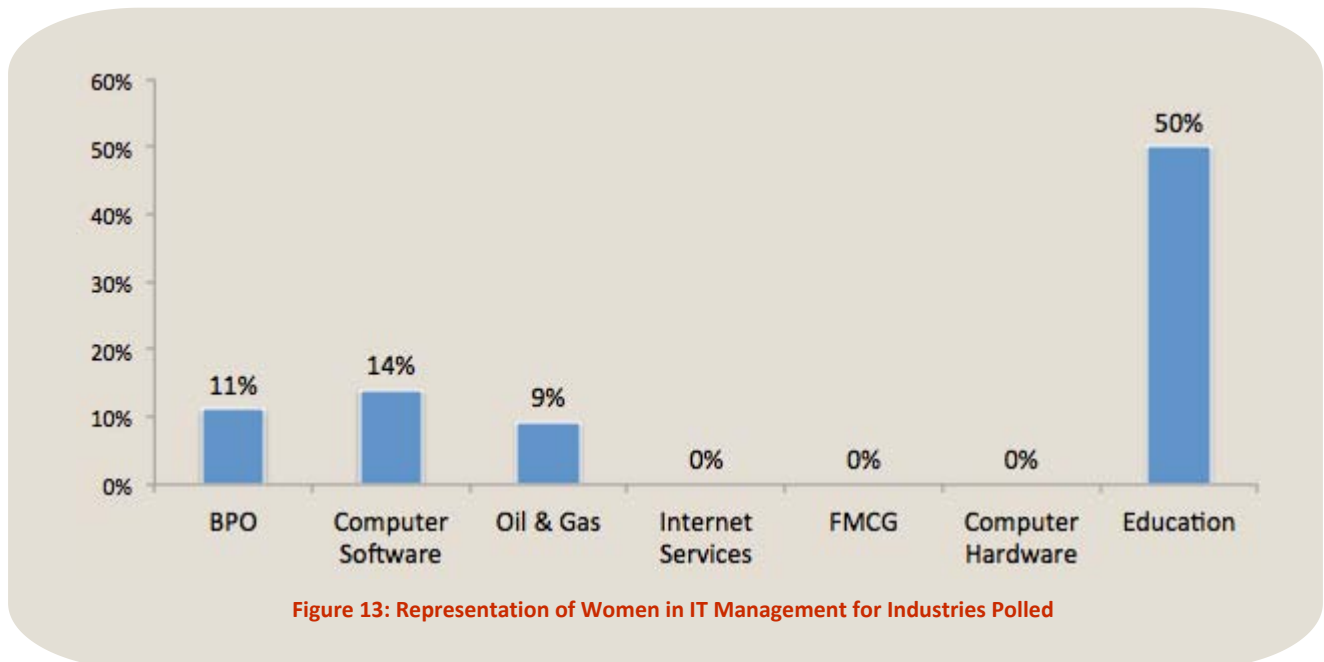
ANALYSIS: WOMEN IN IT STUCK AT MID-CAREER LEVELS

Mid-career Glass Ceiling?

As mentioned earlier, a majority of the women polled (37%) were at their mid-career levels, in between entry level and senior management.

When this data was correlated with the work experience of these women, it appears as if women hit a glass ceiling or get "stuck" at mid-career level in their IT careers.

Let us consider the progression of each career level by the number of years of work experience.

The graph Figure 15 shows the % of women at each career level within a given work experience bracket:

Figure 14: Current Career Level Distribution

As the number of years of work experience increases, those in the contractual and entry level positions decline as with additional years of experience they are more likely to move on to high level career positions. However, when we look at the mid-career positions it appears to plateau over the 8-15 years work experience period. In particular 49% of women who have 4-7 years of experience are at the mid-career levels. The percentage remains around the same for women who have 8-15 years of experience.
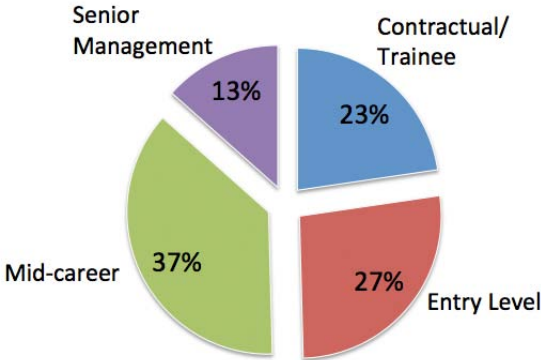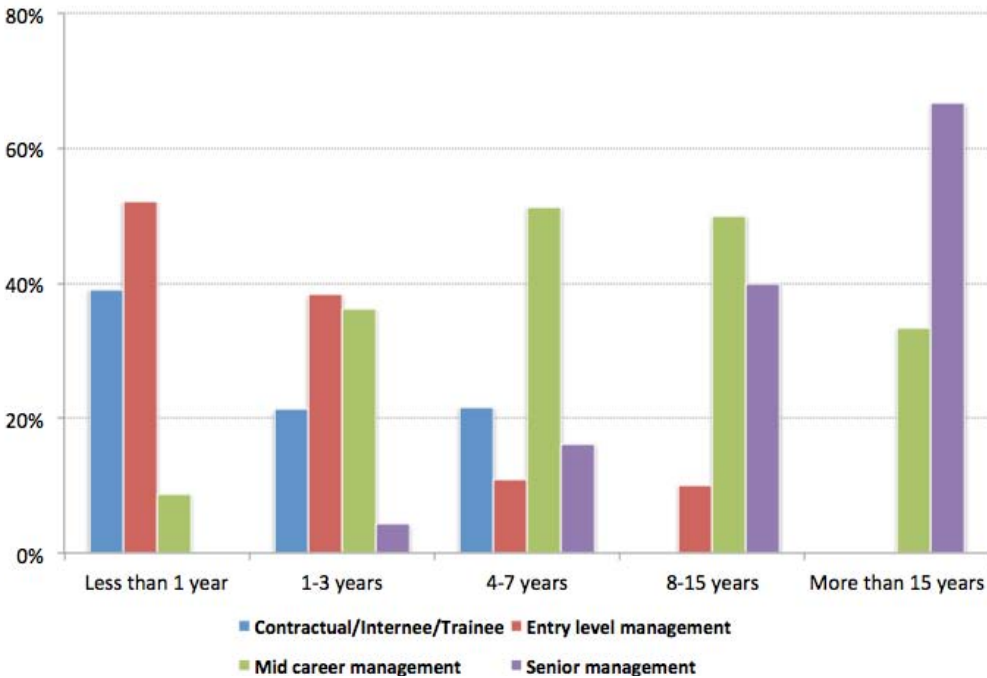

Figure 15: Progression of % of Women at a Given Career Level by Work Experience Bracket

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A different way of looking at this is the following graph which presents the number of women in each work experience/ career level bucket as a percentage of the total number of women polled:
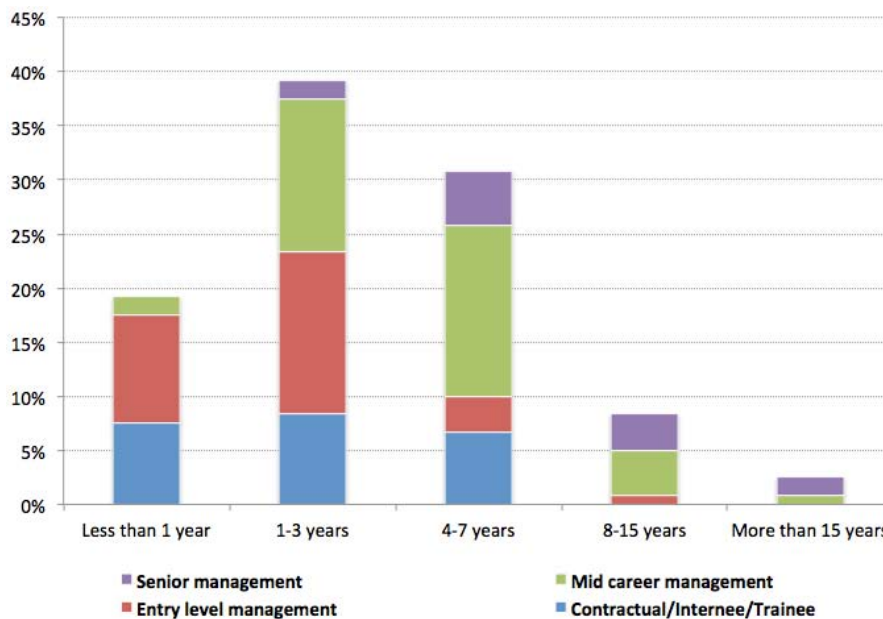

Figure 16: Representation of Women at Different Career Levels with Different Years of Experience

Again, we see that the mid-career level positions tend to dominate in the 1-3, 4-7 and 8-15 years brackets as compared to entry level and senior management positions. In fact the number of women progressing to senior management seems relatively lower by comparison.

Of the IT companies questioned, the number of women who have management roles in the company is barely 13% of the women employed in these companies. This contrasts sharply with 41% of women who have at least 4-15 years of work experience behind them.

In addition to this, only around 2% of women in IT companies own company shares. A majority of companies have no female employees who own company shares.

Potential Reasons for Mid-career Impasse

The lack of female representation at senior levels in IT companies could be the result of a number of inter-related factors. One major concern, global in nature, is the discrimination between promotions for male and female employees. To see if this was a concern among the women workforce in Pakistan's IT industry, opinions were obtained regarding the priority they assigned to promotions as well as their perception regarding the chances they felt they had in getting ahead in their careers in comparison to their male counterparts.

Based on the individual survey however, women apparently remain ambitious and have a relatively positive outlook regarding future promotions. 63% of the women polled agreed that their promotion within the next year was their top priority.
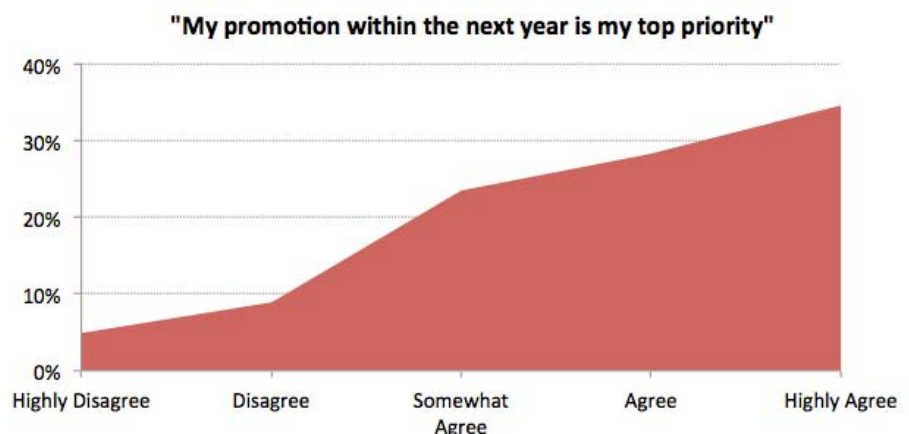

Figure 17: Women's Opinions on their Promotions being their Top Priority

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Women were also asked about whether their chances of advancement were the same as that of their male colleagues. While 69% remain optimistic that they have the same chances of advancement, 19% only somewhat agreed whereas 11% disagreed.

"I feel that I have the same chances of advancement as my male colleagues"
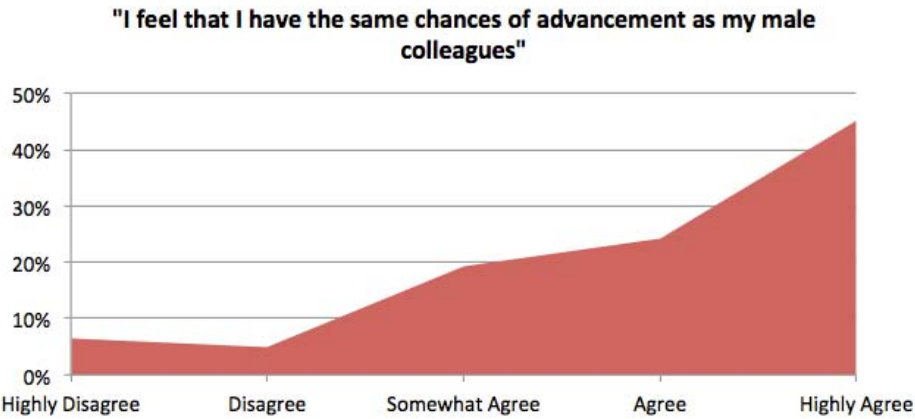
Figure 18: Women's Opinions on their Chances of Advancement at Work

This is also evident from the responses received about the statement: "I'm assigned high visibility projects an equal number of times as my male colleagues". 70% of the respondents agree that they are assigned highly visible projects an equal number of times as compared to their male counterparts with only 4% stating that this was not the case.

"I'm assigned high visibility projects an equal number of times as my male colleagues"

Figure 19: Women's Opinions on their Contribution to High Visibility Projects

ANALYSIS: FEMALE EMPLOYEE RETENTION IN IT

The "Leaky Pipeline" Effect

A red flag within employee retention is the low number of women who have long careers in IT. As per the graph representing the average work e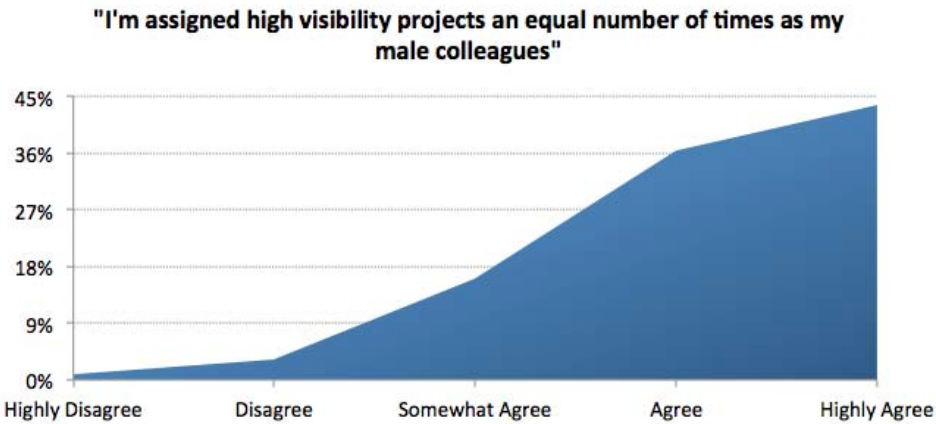xperience for female employees in IT, we find that less than 3% of the overall female IT workforce had more than 15 years of work experience.

In fact, there is a 24% drop between women with 4-7 years of work experience and those with 8-15 years of experience. Disregarding the possibility of sampling bias where more respondents happened to be those with a lower level of experience and the fact that this is one-dimensional data taken at a given point in time, this drop in number seems drastic and could be an indication of the "Leaky Pipeline" effect that women often face while pursuing careers.

According to the International Federation of University Women (IFUW), women face a number of challenges throughout key life moments which threaten their professional careers such as marriage, motherhood, etc. The result is that a significant number of women "drop off" the career glide-path at vulnerable stages of life.
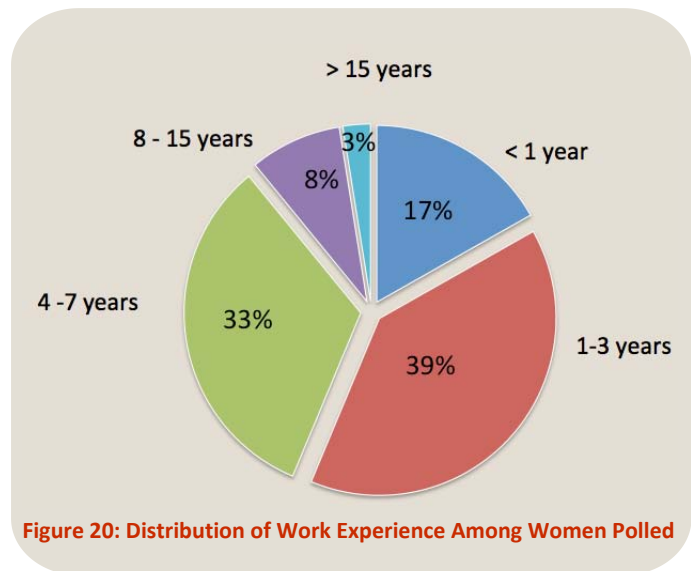

Figure 20: Distribution of Work Experience Among Women Polled
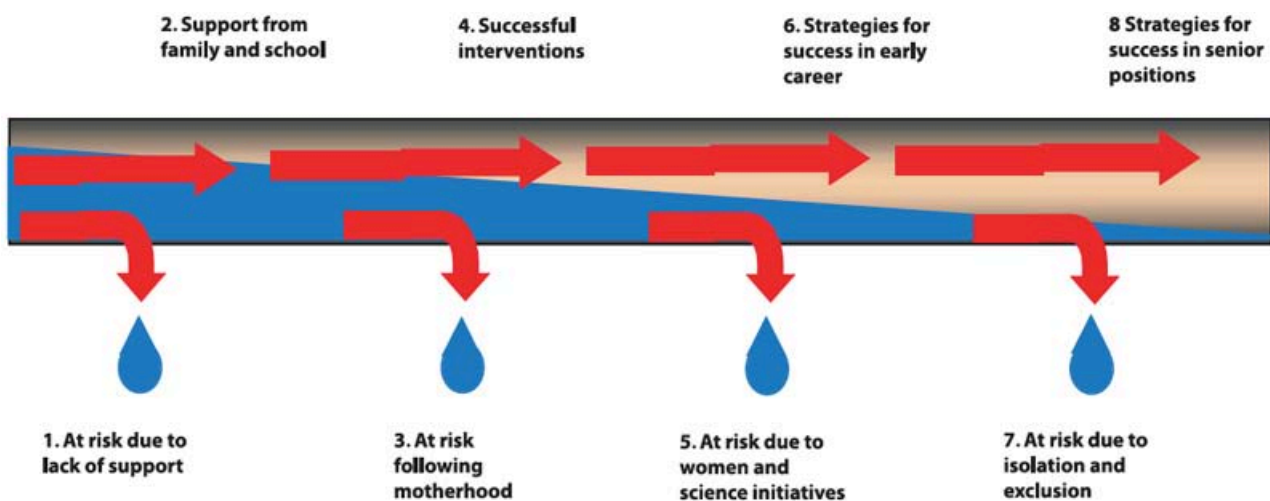

Figure 21: The "Leaky Pipeline" representing life stages at which women are most at risk of leaving their careers

Source: Women in Science and Technology: A European Commission Report

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Mobility of Women in IT

Plotting the total number of years of work experience against the number of years of service with the current employer gives an indication as to the how long an employee persists with an employer. Alternatively, it also indicates how long a company is able or willing to retain an employee.

Total Years of Experience	Years with Current Employer				
	Less than 1 year	1-3 years	4-7 years	8-15 years	More than 15 years
Less than 1 year	100 %				
1-3 years	40.43%	59.57%			
4-7 years	27.50%	27.50%	45.00%		
8-15 years	10.00%	30.00%	30.00%	30.00%	
More than 15 years	0.00%	33.33%	0.00%	0.00%	66.67%

Figure 22: Job Mobility Transition Matrix

Women who had less than one year experience in total are most likely to be with their current employers. Of those who had 1-3 years of experience, around 60% had attained that experience from their current employers whereas 40% had worked elsewhere in the early years of their careers. However, as the number of years of experience increases, the percentage of women deriving the experience from their current employers decreases. For instance, in the 8-15 years experience bracket, only 30% had obtained that experience from their current employers.

This progression shows that as the number of years of work experience increases, women are more likely to have changed their places of employment at least once. The only bracket which does not show this trend is the "more than 15 years" bracket which shows that 67% of employees are at their current place of employment. This however could be an anomaly given the relatively small amount of data available for this bracket (<3%).

Rate of Attrition for Women in IT

The intended rate of attrition within the women polled was considerably high. 32% of the women who responded to this question reported that they intended on leaving their current employers within the next year.

Figure 23: Reported Rate of Attrition for Women in IT
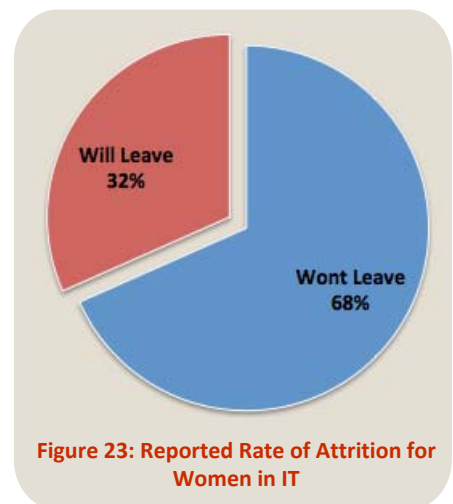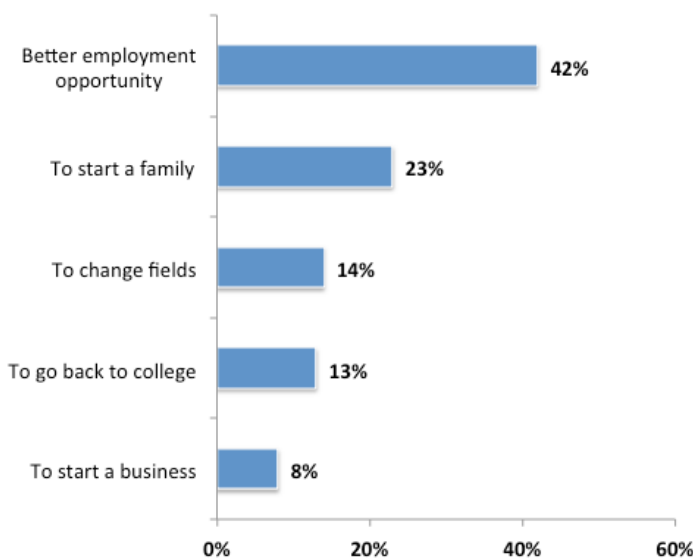

Figure 24: Reasons Cited for Women Leaving Current Employer

Women in IT state that they would remain loyal to their career path. 42% of those polled indicated that they would leave only to find a better employment opportunity within the IT field. Only 14% wanted to change their fields, and an encouraging 8% indicated that they wanted to start their own businesses.

HR Benefits Offered for Retention

From the 97 companies which were polled, the three most common HR benefits for women in IT remain: Paid Maternity Leave, Flexible Working Hours and Emergency Leave.
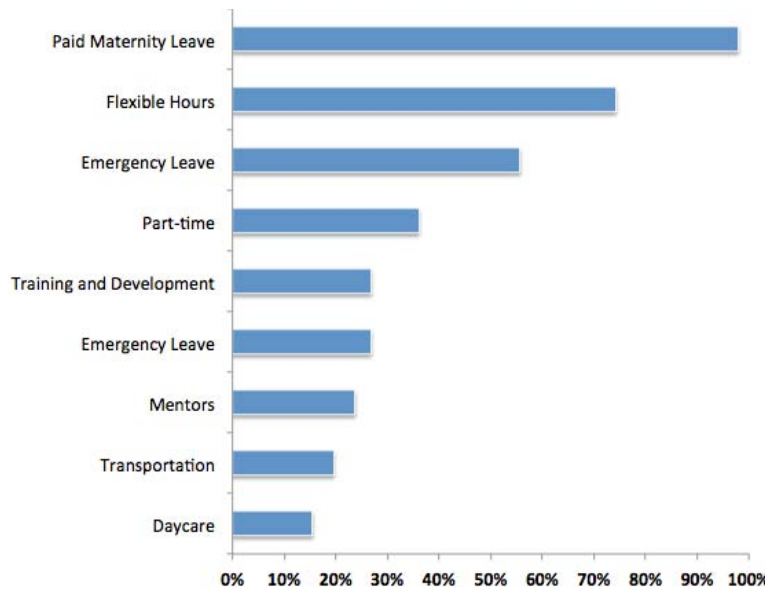

Figure 25: Diversity of HR Benefits Offered by Companies Polled

However, an alarming 29% companies did not offer a paid maternity leave – which is commonly regarded as the most basic of HR benefits for women. Further, out of 71% of the companies which offered maternity leave, only 22% offered Daycare facilities.

Training, Development and Mentoring

Harvard Business Review, in an article titled "Why Men Still Get More Promotions Than Women" stated that mentoring and active sponsorship are essential for women to advance in their careers. However, from the companies that were polled, only 24% had mentoring programs for women, and only 27% had training and development opportunities for women.
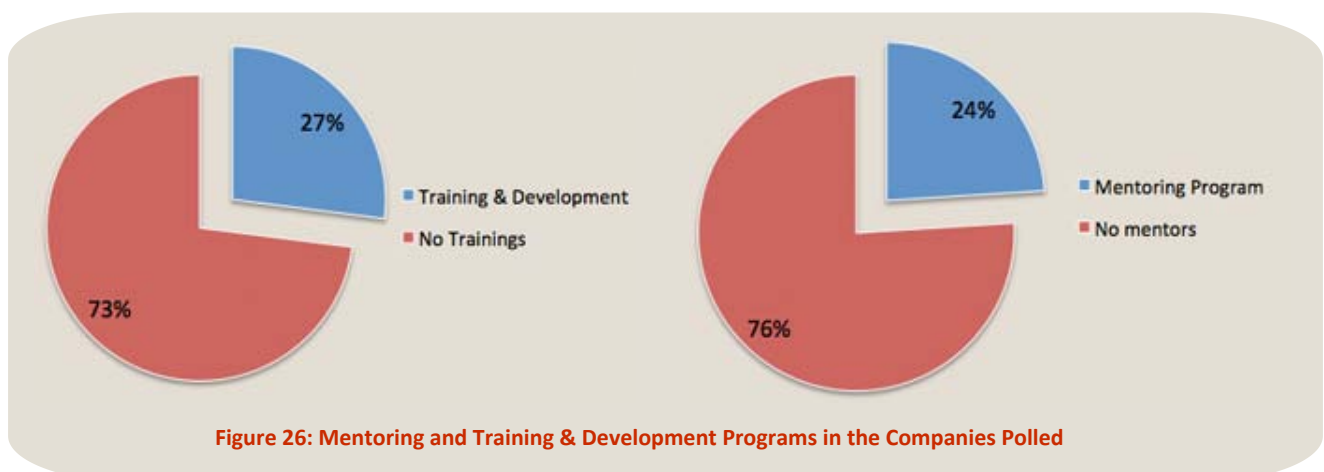
Figure 26: Mentoring and Training & Development Programs in the Companies Polled

Women who had received training in their careers reported higher levels of satisfaction with their jobs and career skills. For example one response elicited from the survey showed gratitude towards the company for further training abroad:

"I was…sent (to) Netherlands for training, and I was the first girl from the office to be sent. I am extremely thankful to my office colleagues and my family, as they encouraged me."

Effect of HR Benefits on Women Empowerment

Women working in organizations which had 5 or more HR benefits had better chances of making it to the IT management within their companies.

From the 50 companies polled, only 20% offered 5 or more HR benefits. However, these companies showed higher women participation rates in their overall employee workforce: they employed 16% women versus 13% women employed by companies which offered less than 5 benefits.

The real difference, however, is seen in the percentage of women in IT management: companies offering 5 or more HR benefits had 30% women in IT management, whereas companies with less than 5 benefits only had 12%. This could potentially mean that women grow faster in companies with better HR benefits.
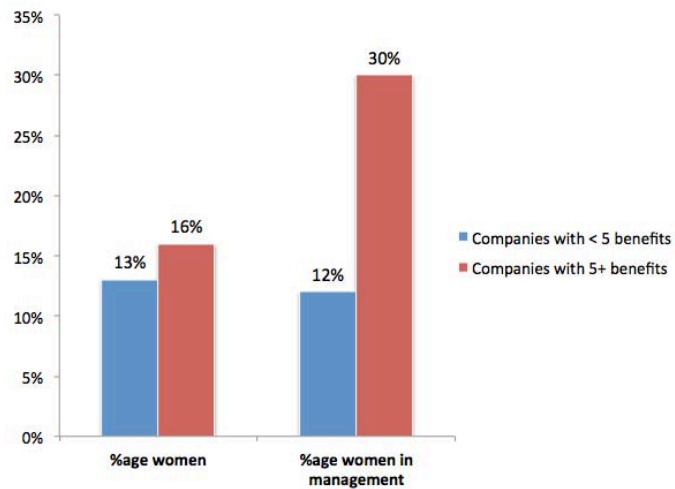
Figure 27: Female Participation Rates in Companies correlated with HR Benefits Offered

Concerns About Working in IT

Women working in IT in Pakistan are satisfied with some parts of their working lives, but very unhappy with others.

a.   *Work Environment*

A majority of the women who were polled did not report any work harassment and expressed that they felt valued and appreciated at their workplace.
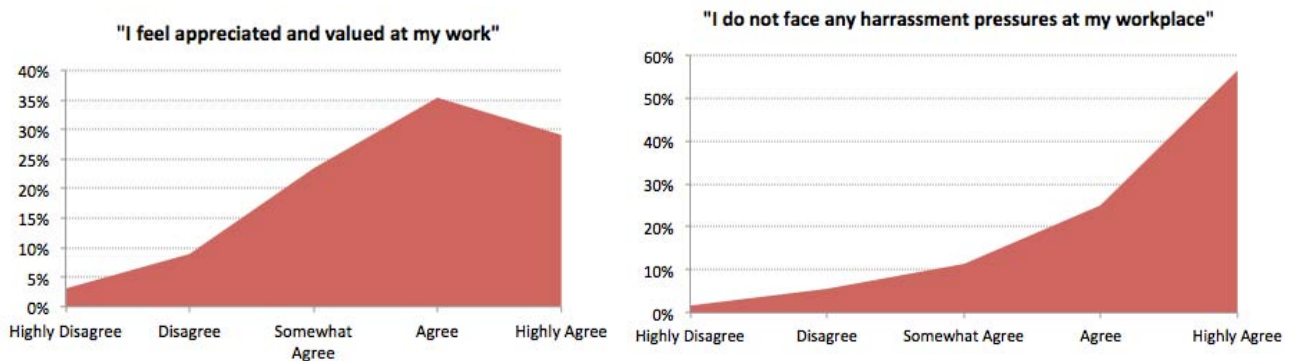
Figure 28: Women Report on the Satisfactory Work Environment in IT

However, a look at recommendations that women submitted to improve women's work environment in IT reveals a deeper underlying dissatisfaction. A number of women stated that they faced frustration at the work place due to underlying gender biases. We received comments such as

"The reason that I'll leave my job is because of the office environment. Women are just not appreciated as contributing members in IT"

"Women should have equal opportunities to grow in IT"

We explore this issue in more detail in the "Recommendations" section of the report.

b.   Work Timings: Frequent Late Sittings

The major concern for women working in IT seems to be their work timings with an alarming 20% of women reporting that they had to work more than 75 hours a week. Another concern is with regard to getting sufficient time outside work to fulfill their social and familial responsibilities. 35% of the women polled felt that they did not get enough time outside work to fulfill their other obligations.
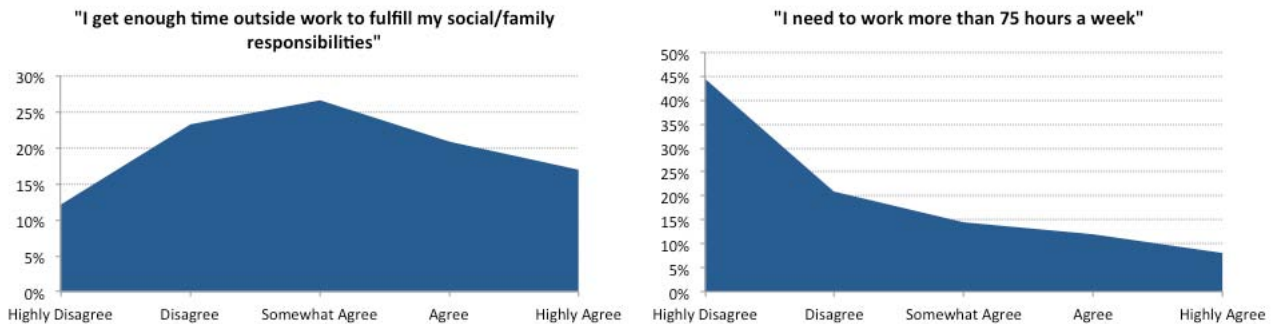
Figure 29: Women Highlight Concerns about Work Timings in IT

We received comments from women reporting very dissatisfactory levels of work-life balance:

"Work timings are definitely an issue"

"There is a critical need to eliminate frequent late sittings"

A number of women expressed a deep interest in pursuing part-time projects, or projects based on working from home. These suggestions will be tackled in the "Recommendations" section of the report.

c.   Lack of Daycare Facilities and Other HR Benefits

Although the issue of the provision of daycare facilities was not specifically addressed in the survey form, this issue emerged as a critical area of concern through the "Recommendations" section of the survey. More than 20% of the women who filled out this section claimed that a major reason that they would consider leaving their jobs would be the lack of daycare facilities at their workplace. A number of women also reported that they did not have any transportation facilities provided by their employers.

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RECOMMENDATIONS

In response to the request "We want to hear from you! Please list any recommendations that you have to RETAIN or INCREASE the participation of women in technology in Pakistan" we received a number of encouraging comments as well as some critical recommendations for improvement of the work environment in IT for women.

Encouraging Passion for IT by Women

Women reported satisfaction mainly in pursuing their passion and love for IT and showed their enthusiasm in encouraging other women to join the field. Women were cognizant of the fact that other women desirous of joining IT will need all the support and encouragement that they can get from women who are already involved in the field. We received comments such as:

"Women should take part actively in technology as excelling in it is not dependent on one's gender. Women can even perform better than men in technology."

"I would highly recommend and promote a systemised and institutionalised approach to encourage Pakistani women to work in technology. And I will always be ready to help in any way."

"Women's entry into technology depends on the support of the women who are currently working in the field. Good word of mouth is really what matters. I, being a technology marketeer, would recommend other women to take part in this field."

Recommendations on Retaining and Increasing Women's Participation in IT

Women working in IT had three key recommendations about sustaining careers in IT, creating a better work environment and increasing women's participation in IT:

a)   Provision of better HR benefits
b)   Creation of equal opportunities for women
c)   Reduction of gender stereotyping

a.   Better HR Benefits

"Flexible timings and options to work from home are quite critical for working women in general and more so for women in IT."

"In order to get more women employees in IT...companies should make their work timings flexible and eliminate frequent late sittings. Provide pick & drop service and day care."

Women felt that the key reason why a number of women hesitate to work in IT or choose to leave their careers in IT is the absence of a realistic and reasonable flexible work-hours policy. Women recommended that they should have the flexibility to be able to switch between a part-time and full-time work load, depending on the projects that they take on. They should also have the flexibility to work from home if the progress of the project is not hampered.

Two other key HR benefits that were highly recommended by the respondents were the provision of daycare facilities for children, and pick-and-drop transportation services.

b.   Creation of Equal Opportunities

"Representation of female Project Managers should be increased - I think some male managers prefer hiring males for Software Development posts."

A number of women were very vocal about gender inequality at their workplace. They felt that they did not have equal opportunities when it came to hiring, receiving training and being given opportunities to grow within the company. This could be a potential reason for the "glass ceiling" that many women in their mid-management careers face as they do not seem to be able to smoothly transition to senior management.

c.   Reduction of Gender Stereotyping at the Workplace

"Females are not appreciated within the IT department - this shows a bias because of the culture and environment we move in."

Women believed that the IT industry has stereotyped what constitutes a person who excels in the field of science and technology- namely that these persons are typically male. They believe that if this stereotype is not deliberately addressed within an organization or in the industry as a whole, women will not be able to grow and progress in or be seen as valuable contributors to this field.

Within the workplace some women reported a number of gender stereotyping issues such as:

- Unfriendly environments where they were not made to feel as comfortable as their male colleagues
- Being treated as "less smart" as compared to their male counterparts
- Not being encouraged or appreciated as much as their male colleagues

The key recommendation here was to provide basic training in how to treat colleagues with respect, irrespective of an employees' gender. This is an important recommendation, as a number of global organizations which rate highly on employee satisfaction have successfully managed to create an organizational culture of respect, safety and equality. A study by Ashley M. Guidroz on "Workplace Diversity" shows that organizations which foster a strong organizational culture, which may be different from the national culture, create higher performance within organizations.

CONCLUSIONS

The study has highlighted women participation rates in IT as a whole and in companies belonging to various industries in the country. This rate tends to be in line with the female labor force ratio of the country, i.e. 14% of total labor force. An initial profile of women in the industry was also developed covering work experience, academic qualifications, salary brackets and career level. The studied has emphasized issues such as:

- The apparent difficulty of women to progress beyond the mid-career levels in this field,
- The significantly lower proportion of women with longer work experience
- The apparent positive effect that more HR benefits have on retention and career advancement
- The concerns that women have about work environment and timings

Finally it summarizes the recommendations provided by respondents regarding ways to improve and increase retention of female IT workforce in companies.

A more detailed studied is recommended for an in-depth investigation of the reasons behind some of the issues highlighted.

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Company Name	URL Address
110 Solutions	http://www.110solutions.com.au/
Acme technologies	http://www.acme.net.pk/
Advanced Research Projects & Technologies (Arpatech)	http://www1.arpatech.com/
Aga Khan University Hospital	http://www.aku.edu/
Amigo Software Pvt Limited	http://www.amigo-software.com/
Arn tariq	http://arntariq.com/
Arwentech Pvt Limited	http://www.arwentech.com/
AutoSoft Dynamics	http://www.autosoftdynamics.com/
Avanceon	http://www.avanceon.com/
Averox (Pvt) Ltd.	http://www.averox.com/
B Solutions	http://www.bsolutions.pk/
Bahria Enterprise Systems & Technologies (BEST)	http://www.best-bf.com/
Bayt.com	http://www.bayt.com/en/pakistan/
Bentley Systems	http://www.bentley.com
Breezecom	http://www.breezecom.biz/
Business Recorder	http://www.brecorder.com/
Calling Career	
Clary Business Machines	http://www.clarybusinessmachines.com/
Cloud BPO - A breezecom company	http://www.cloudbpo.net/
Computer Research pvt limited	http://www.cr-pl.com/
COMSATS IT Center	http://ciit.net.pk/
Comstar Information Systems Associates Limited	http://www.comstar.com.pk/
CTO 24/7 (Pvt) Ltd	http://www.cto247pk.com/
Cubix labs	http://www.cubixlabs.com/
Diyatech Pakistan	http://www.diyatech.com/
DPL	http://www.dplit.com/
EfroTech Services	http://www.efrotech.com/
Emmaculate	http://www.emmaculate.com/
Enterprise Team	http://www.eteamid.com/
Etilize Pvt Ltd	http://www.etilize.com/
Evamp & Saanga	http://www.evampsaanga.com/
Expert Systems (Pvt.) Limited	http://www.expertsystems.net/
Fight Against Thalassemia	
FiveRivers Technologies Pvt. Ltd.	http://www.fiveriverstech.com/
Folio3 Pvt. Ltd.	http://www.folio3.com/
Forman Christian College (A Chartered University)	http://www.fccollege.edu.pk/
IB&M, UET	http://ibm-uet.edu.pk/
Ikonami pvt limited	http://www.ikonami.com/
InfoTech Pvt Ltd	http://www.infotechgroup.com/
Intagleo Systems	http://www.intagleo.co.uk/
Integrated Systems Research Private Limited	http://www.isrpl.com/
Karachi Nuclear Power Plant	http://www.paec.gov.pk/kanupp/kanupp-index.htm
Kraysis Pvt Ltd	
LAseraph	
LMKR	http://www.lmkr.com/
LMKT pvt Limited	http://www.lmkt.com/

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Company Name	URL Address
LUMS	http://www.lums.edu.pk/
Maison Consulting & Solutions	http://www.m-consultants.com/
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National Data Consultants (Pvt.) Ltd	http://www.ndctech.net/
National Foods Limited	http://www.nfoods.com/
NetSol Technologies Limited	http://www.netsoltech.com/
Nokia	http://www.nokia.com/
Ovex Technologies Pakistan (Pvt) Ltd	http://www.ovextech.com/
Pribno	http://pribno.com/
Sakonent	http://www.sakonent.com/
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Web Science and Technology IBA	http://websci.iba.edu.pk/
Wtech	

P@SHA would like to thank all the companies and individuals who participated in this study and made it happen. We hope that our IT sector will continue to thrive and that gender diversity will continue to be on the rise.

This study was conducted by the research department of Pakistan Software Houses Association for IT & ITES (P@SHA).

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