

CHAPTER IX

FINDINGS AND CONCLUSION

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Socio-Economic Background of Women Engineers in Information Technology

- The age wise distribution of women IT engineers, which indicates 46.75 percent (187) of the respondents belong to the age group between 21–30 years and 33 percent of the respondents belong to the age group between 31 – 40 years because the young women professionals are more receptive to change, as they have not invested in traditions, and indeed want changes due to their westernized IT culture, because Indian culture is more family oriented rather than individualistic.
- Among the 400 respondents, 40 respondents comprising 10 percentage belong to the Schedule Caste Community and 0.5 percent (2) respondents belong to the Schedule Tribe Community. This finding indicates that most of the women SC and ST respondents belong to the ruralities of Tamilnadu and they lack in the communication area because of the family and educational background and 40.5 percent of the respondents belong to the Forward community and 49 percent of the respondents belong to the Other Backward Community. The OBCs are ‘dominant castes’ in that they are the primary landowners in their regions, as well as often the most wealthy and politically powerful groups. This finding indicates there is a vast differentiation among the respondents in the IT industry on the basis of the caste.

- This finding indicates that the most of the respondents 73.25 percent belong to Hinduism. In the Indian Hindu families religious thoughts have been changed towards women and also they are encouraging them to work under the westernised software sectors. 15.75 percent of the respondents belong to Islam and 9.25 percent of the respondents belong to Christianity and least 1.75 percent of the respondents belong to the Buddhism.
- The analysis explained that 78.5 percent of the respondents have completed their professional graduate degrees and they opined that they had the idea to study the higher degrees for their technical attainment as well as together the promotional activities in the software sector. And the 16.7 percent of the respondents have completed the post graduate degrees and also among them majority of the respondents had completed their post graduate degree through distance education. Most of the respondents were willing to do the M.B.A in project management in software industry. Only 3.25 percent of the respondents had doctorate in software industry. They occupied the superior position in the industry along with their experience.
- More than 40 percent women were single without child and emphatic about the fact that their career was a valuable part of their lives because that their careers defined who they were. Among the 400 respondents 34 percent of the respondents, especially those married with one or two children, said that they are unable to take up challenging roles that

require long hours or extensive travelling. And 16.75 per cent of the respondents in the IT sector were separated with children and 3.5 per cent of the respondents were widowed with children and 5 per cent of the respondents were divorced with children. This reported a higher degree of conflict between family and work affecting the other.

- The study found the truth that the respondents accounting to 41.75 per cent received a monthly income between Rs. 25001 – Rs. 35000 and 32.75 percent of the respondents received a monthly income between the Rs. 35001 to Rs. 45000. Only 10 percent of the respondents received the monthly salary of Rs. 45001 to Rs. 55000.
- The finding indicates that 15 per cent are coming from ‘Business’ background, 40 per cent are from private employees background 28 per cent are from government employees background , and 17 per cent from the agricultural family background.
- Sixty five per cent of the fathers in this sample were in occupations (White collar jobs) that can be identified as solidly middle class: they were managers or executives in public and private sector companies, government officers, professionals such as doctors and university professors, and businessmen. Only 25 per cent had fathers in lower level clerical blue-collar jobs, and 3 per cent were from agricultural (Red collar jobs) families. These figures suggest that most software engineers come from middle class, educated, urban backgrounds. Forty three percent of the mothers in this sample were from white collar jobs and 27

percent of the respondent's mothers were belong to the red collar jobs that mothers belong to house wife and handicrafts and agricultural industry. And only 3 percent of mothers and 4 percent of the fathers belong to the gold collar jobs such as the Chief Executive Officers in private sector, scientific sector and Judiciary.

- From the survey women software engineers are drawn from rural, town and cities. Majority of the respondents 36 per cent were found to be from Metro cities (including Chennai), 29 per cent of respondents from various states in India. However, an interesting finding is that a substantial proportion 35 per cent of the respondents comes from rural areas, including district and taluk headquarters such of Tamilnadu states. Majority of the respondents 87 per cent were from South India, given the location of the study in Chennai and the fact that the region produces a large number of engineering graduates and is a centre for the IT industry. The largest proportion of respondents in the survey were born in Tamilnadu (35 per cent), followed by Karnataka (17 per cent), Kerala and Andhra Pradesh. Despite the bias in favour of South India, the data also point to fair degree of regional diversity in the IT workforce.

Role Performance of the Respondents in IT Sector

- Among the 400 respondents employed in MNCs in Taramani Tidal Park at Chennai, 5 per cent of respondents were working in Cisco software development companies and 20.5 per cent of the respondents are working in the TCS and only 18.25 and 18.5 percent of the respondents

were working in the Sify and California Software Industries Ltd and 37.5 percent of the respondents were working in the HCL.

- From this survey 47 respondents are software developer, 47 percent of the respondents are senior developer, 52 respondents are team leader, 71 respondents are quality tester, 45 respondents belong to the quality analyser, 107 respondents are test writer, 21 respondents are system analyst and 4 respondents are the project manager in the study. On the basis of the employees designation 21 respondents has been taken from the cisco software company, 82 respondents from the TCS, 73 respondents from California software industries ltd, Sify respectively and 151 respondents from HCL has been taken for this study.
- From the study it is found that 39 per cent of respondents were working in software development and 22 per cent were in testing or quality assurance. Only 15 per cent were in higher-end technical jobs such as design/ architecture, 14 percent of the respondents were in consultancy and 5 per cent were in management.
- Through this study found that 46.7 percent of the respondents belong to the age group of 21 – 30 years. Among them 35 percent of the respondents were working in the department of the software development, because most of the respondents had undergone the training programme after the recruitment regarding to the software development. After the completion of the training programme they would have been allotted for the specific field in the IT sector. Of the

total 33 percent of the respondents belong to the age group of 31 - 40years, among them 19.8 percent of the respondents were working in the sector of software development and testing and quality assurance.

- From this survey it is found that the working hours vary across phases of the project cycle. The majority of respondents (61 per cent) said that they work ten hours per day on average, while only 39 per cent work more than ten hours. Most medium and large companies have complex time management systems to keep track of how employees spend their time; this is necessary not only for billing clients but also for making future project estimates and to adhere to quality processes such as the calculation of productivity. One respondent referred to this as a system of 'time slavery'.
- From the study 37 percent of the respondents have experienced in the software industry for 4 - 6 years, of the total 27 percent of the respondents have experienced in the software industry for 2 - 4 years and 23 percent of the respondents have experienced only below two years.
- From the survey shows that 46.7 percent of the respondents belong to the age group of 21 – 30 years age groups among them 41.1 percent of the respondents had experienced 2 - 4 years. 33 percent of the respondents belong to the age group of 31 – 40years, and among them 30 percent of the respondents had experienced 4-6 years. This indicates that age is the important factor to determine ones experience.

- From the survey it is found that the 58.5 percent of the respondents agreed to the idea that performance depends upon the idea that skill development of the individual. Young female software engineers were asked to undergo the training and skill oriented training programmes for few months. Among the total 94.5 percent of the respondents agreed that performance would promote the career position in the company. 91.75 percent of the respondents agreed that high performance will promote the bonus and increment along with the salary and 80.75 percent of the respondents said that skill oriented performance is the path to design the career opportunities. Better performance would provide skill to tackle the situations and targets in the company.
- The analysis found that 34.5 percent of the respondents had benefited under the Base Pay Plan. Of the total 49 percent of the respondents had benefited through the Individual Incentive Plan.
- From the survey it is found that 58.5 percent of the respondents agreed that they have the future targets for the development of the career in the software industry. Of the total 57.75 percent of the respondents agreed with the statement of acceptance of the feedback whenever they received the feedback regard the software industry and 58.5 percent of the respondents agreed with the using the graphic packages at the time of project presentation. Of the total 47.25 percent of the respondents agreed with regularly evaluate their own performance and 83 percent of the respondents had confident over their abilities. Of the total 49.5

percent of the respondents agreed with they influence others plans or activities effectively.

- The researcher presents the fact that 62.5 per cent of the respondents strongly agree that being a women is an asset for the company. Women have long played a vital role in engineering, over coming discrimination and harassment to bring some of the most significant field moreover women have made and continue to make outstanding engineering contributions. A majority of 91.2 per cent strongly agreed that functional or technical expertise when the grounds for satisfaction at work are detailed; on the majority of criteria women express a higher level of satisfaction than men. The criteria that obtain the highest scores and are selected by more than two in three women engineers concern the qualities they find in their work interest, autonomy and variety are mentioned by more than eight in ten women engineers. The finding also revealed that 61 per cent of the respondents who worked in companies that regularly expected their employees to work more than 50 hours a week, and regularly put their jobs before their families especially to be considered favourably by the top management. Furthermore, successful women engineers reported working in companies that supported their efforts to balance their work-life responsibilities.

Problems Faced by the Respondents both in Working and Family Environment

- In this survey 44.5 percent of the respondents disagreed with the statement of lack of time to spend with family because the IT jobs are one of the westernised and more prestigious and well economic jobs in the emerging 21st century. And 47.25 percent of the women IT workers felt that they have been socially isolated from the society due to often they work much longer hours or even stay overnight in the office (known as a 'night out') or work on weekends, when faced with a project deadline. Further 61.25 percent of the respondents agreed that they were forced to work over the normal time of the work due to the deadline of the project. Equal ratio of the respondents agreed and disagreed with their children engaged to do the IT jobs.
- The researcher presents that 75.25 per cent of the respondents strongly agreed child rearing is a difficult task and also found that 51.75 percent of the respondents agreed that family support is need to continue the job in the software industry. Because the young IT couples employ various strategies to manage their domestic situation, from heavy dependence on servants and crèches, to reconstituting the joint family by inviting one or the other set of parents to live with them, primarily to provide childcare. But making and maintaining these arrangements often only add to the stress on women. In some cases such couples even leave their children with grandparents in India when they are working abroad. Because of

these difficulties, many women postpone having children until they feel they are more 'settled'.

- According to pattern of occurrence a high prevalence of visual problems 41.75 per cent among computer professionals. Monitor height and glaze angle also affect the eyes and lower monitor height are likely to reduce eye discomforts. It showed that the symptoms increased with duration of span of computer use and with use of improper furniture. The symptoms were also more in spectacle-wearers, compared to non-spectacle users. Among the women software engineers, risk factors associated with Musculo-skeletal disorders 36.75 per cent include the integration of biomechanical factors such as static muscular overload, repetitive motions, conditions related to the work station and work environment related to the working organization, as well as those associated with the psychosocial aspects of work.
- The researcher found that 69.75 percent of the respondents strongly agreed that the psychological problems (tensions of satisfaction and commitment) and the stress (anxiety and anger) in 91.75 percent subjects and out of total 64.75 percent of the women IT employees suffered by the mental depression (marital discord, conflict with in-laws).
- From this study 46.7 percent of the respondents belong to the age group of 21-30 years, among them 82.2 percent of the respondents strongly agree with age is the important factor to meet the psychological

problems in the IT sector and also found that 69.75 percent of the respondents strongly agreed with the idea that age are the kind of factor to face the psychological depression. The younger age group of the respondents were forced to night shift and these workers face physiological, emotional and biological problems, based on disturbed rhythmic patterns of sleeping and waking.

- The study found that 37 percent of the respondents were 4 – 6 years of working experience among them 78.38 percent of the respondents agreed with an experience is key factor to tackle the psychological problems. And 79.35 percent of the respondents belong to the group of below 2 years of working and they experience face high level of the psychological problems due to their inexperience in the field.
- This survey analyses 54.75 percent of the respondents agreed that prevalence of divorce among the professionals because due to the nature of the work. Software professionals are paying a heavy price for the hefty pay packets and lavish lifestyle that their jobs offer. As IT field is a brain-taxing competitive job, the professionals get into emotional problems, which reflect on their marital life. And also the researcher found that 27.75 per cent of the women IT professionals strongly agreed with human-computer results like lack of human interaction and attending function at community.
- Nearly 70 percent of the respondents disagreed with the conceiving women have to face difficulties in the IT sector. All IT companies

claim that they have been trying to improve the gender ratio in their workforces by formulating 'woman friendly' policies, such as options for part-time work or working from home, provision of crèche, and so on.

- From the study it is found that 65.5 per cent of respondent disagree of sexual harassment at the workplace. However, most of the larger companies have set up committees and procedures to handle such cases in accordance with the Supreme Court directives, especially after the highly publicized various cases, and several companies have formulated more proactive initiatives to sensitise employees. So, the industry itself should evolve a common code of 'best practices' that would provide a framework for dealing with this issue.
- The researcher presents the fact that 58.5 per cent of the respondents strongly agreed that the major problem of frequent travel and short and long-term stints of onsite work while unmarried women usually accept onsite assignments eagerly, and one finds quite a few women working abroad along with their male colleagues without much difficulty, married women prefer not to take up these assignments due to domestic or other pressures.
- The researcher found that coping strategy fallowed by the respondents. Out of the total 41.75 per cent of the respondents said that shared with friends, and 36.75 per cent engaging in physical activity, in order to take their minds off work and its accompanying stressors.

Furthermore, participants seem to select experiences that will provide them with an element of escape, both mentally and physically, from the demands of work.

Indicators Relating to Empowerment of Women Engineers in Information Technology

- From the study it is found that the primary, secondary as well as higher secondary is absolutely necessary to attain the empowerment in the society as well as in the family. Out of the total 61.25 percent of the respondents agreed with higher degree are one of the important indicators of educational to get the employment opportunities and 33.5 percent of the respondents had said that professional qualification is necessary for the educational empowerment.
- The survey projects the truth that 96.75 percent of the respondents said that the occupation is absolutely necessary for the women's empowerment in economic sphere, because occupations are associated with income, educational requirements and power within society. The researcher also revealed that 51.25 percent of the respondents said that husband's occupation was not necessary to determine the women's empowerment.
- Followed by 61.25 percent of the respondents said that separate home (House registration in the name of women) is absolutely necessary to the women. Because housing is the important economic factor in the society

and also now a days housing pattern is one of the economic indicator to determine ones status in the society.

- The highest 96.15 percent of the respondents said that monthly income is the most important indicator to empower the women economically. In India women are at the margin of economic activities and are concentrated in unorganized, low skill and low paid jobs, lack of control over economic resources by women is a well-documented fact. However, in India some laws have been passed and others are in the offing to make women joint owners in land and property and have equal inheritance rights.
- The analysis of 81 percent of the respondents said that women's role is absolutely necessary to contribute economic security to the family and 91 percent of the respondents agreed with savings are absolutely necessary to the women to attain the economic empowerment.
- All of the respondents said that political awareness is absolutely necessary to the women in the modern society. Of the total 89 percent of the respondents said that position in the political party is not necessary to the women, because it is easy one to attain that position and to survive the male dominated field is struggle.
- The highest 91.25 percent of the respondent's decision making is the important factor to decide the women's empowerment in the family. And also 86.25 percent of the respondents said that freedom at family level is necessary to the women and freedom is absolutely necessary for

women in purchasing (81percent), expenses (91 percent) and managing family (67 percent). Interestingly all respondents urged that freedom is absolutely necessary to the women to help their parents.

- From the study 39 percent of the respondents said that language proficiency is absolutely necessary for the women to attain the empowerment in the public sphere. Language is a symbolic tool for the exercise of authority. The highest 94.75 percent and 90.75 percent of the respondents said that social interaction and social mobility is the important factor to women empowerment respectively.
- A larger number of 80.75 percent of the respondents said that women in membership in any organization are absolutely necessary to the women empowerment because some organizations provide social security to the women. And the highest 97.75 percent of the respondents said that friendship circle is absolutely necessary to the women, because a woman in the working environment friendship is the important factor shares their feelings.

Consumption Patterns and Lifestyles of Upwardly Mobile Professionals.

- In the survey 29 percent of the respondents saved up to 25 percent from the salary and 43 percent of the respondents saved the 25 – 50 percent from the salary and only 28 percent of the respondents saved 75 percent of the money from the salary.
- From the study it is found that 56 per cent spend more money to collect consumer goods that have become emblematic of this new middle class

lifestyle a two wheeler or car, cell phone, elaborate music and home entertainment systems, and so on. And also a majority of 92 per cent mentioned clothing and cosmetic goods as a major item of expenditure in their monthly budgets. Most important, many have been able to purchase their own spacious flats (especially in the new luxury housing complexes that have come up all over Chennai) at a relatively young age.

- The analysis of 78 percent of the agreed indicates that their lifestyle had been changed after being an employee of the IT industry. While this inter-generational change in standard of living is a major theme of many informants' narratives about their experiences and their families, and most respondents cited their earning power as one of the positive aspects of working in IT, their feelings about their sudden improvement in economic status are conflicted.
- These modern apartment complexes, and the lifestyles they promote, are helping to create a homogenised class based lifestyle (30.25 percent), while fragmenting older kinship (33 percent) and caste-based neighbourhoods (36.75 percent).
- From the study respondents said that their lifestyles and attitudes are different from those of their parents; of these, half of them said they have greater financial independence (31 percent), while one-third spoke about long working hours, 'more mechanical life' (53 percent), and lack of social life (16 percent). Women IT professionals are especially

critical of the social consequences of their work, in that they have little time or energy to devote to the family or friends.

- The researcher presents the fact that majority of respondents reported that their standard of living has improved, many do not believe that they lead better lives than their parents. They said that there was no time and space to lead more fulfilling lives, keeping up relations with family and friends (12 percent), pursuing outside interests (13 percent), and generally enjoying a more relaxed existence (8 percent).
- In the survey 46 per cent of respondents said that their social circle in Chennai consists of friends from college, while 58 per cent mentioned office colleagues and half said family/ relatives. Networks of former classmates and former and current colleagues provide an important social outlet and support system for young unmarried software engineers, many of whom have come to Chennai alone. Even they have the friends in the inborn town they could not maintain their friends as well as relatives due to their busy mechanical schedules.
- From the survey it is found that a large proportion 38 per cent of respondents said that they belong to some kind of membership in the voluntary organisation and 33 per cent belong to professional organisations. Many IT professionals are involved in some kind of voluntary 'social work', and many expressed a desire to 'give something back' to society through such activities. Voluntary activities are also promoted and encouraged by a number of IT companies, which run

outreach programmes of various kinds or link up with NGOs for this purpose. Thus, even though they may be leading lives that are more fragmented than their parents' generation, many are not lacking a sense of social responsibility and commitment.

- The majority of 76 percent said that their parents feel proud, that IT work has a 'high status', or that they are happy about the income. But most of the respondents mentioned negative attributes, such as: 'they complain that they never see me'; 'they worry about job security' (68%); 'they think IT work is too stressful' (43%); 'they think I am working too hard and ruining my health', and so on. The fact that IT professionals move frequently only exacerbates this problem, but they do seek ways of maintaining relations from a distance.

CONCLUSION

Today, information technology has changed the communication paradigm, making it no longer difficult to reach a large number of people more or less at the same time; and that too enable them to respond, interact as well as obtain a copy of the information within a low-cost. Information Technologies (ITs) apart from sensitizing people against this heinous crime and helping them in general to change their opinion about a girl child, can also play a highly interventionist role by proactively pursuing cases against erring doctors, booking them under the law of the land. The use of IT helps to bridge the gap

between people's opportunities for self-employment in the informal economy and the high growth sectors of the world economy.

The success of the IT industry has created a new global image for India, and as a result it has come to be regarded by many business leaders, international agencies, as well some of the political elite, as a model for India's growth and development that can be emulated in other sectors. Emerging from a background in which the ability of any Indian industry to gain a global presence was unimaginable, it is to the credit of the IT industry that a positive public image, a collective sense of achievement, and a new-found confidence have been generated in the nation. However, the euphoria about the achievements of the software and services outsourcing industry tends to ignore its specific location and role within the global informational economy, as an export-oriented industry that is highly dependent on global economic developments and trends. Due to its concentration on outsourced and offshore software and IT-enabled services, the Indian IT industry has developed largely as an enclave, one that is closely linked to the global economy but has few substantial connections to local, regional, and national economies.

India's Information Technology (IT) sector lives many contradictions: on the one hand it pays some of the highest salaries to young graduates in India, and on the other many IT professionals are called 'cybercoolies' in India as well as in other parts of the world. While the IT industry draws accolades for fighting against impossible odds for creating such a world-class industry in India, it is also uniformly reviled, for example, by noted citizens of Bangalore,

for spreading a crass consumerist culture. And while IT is a high technology industry, hiring only professional engineers, it also draws flack for being a place where intelligent people are drained of their creativity while doing mindless back office work.

Similarly, although the ITES industries hold a veneer of a college campus where everybody is doing 'cool' work, it also holds the notoriety of being a modern-day version of Roman slave ships for the closely supervised and physically and mentally exhausting work that is extracted.

Earlier academic literature has looked extensively at India's and particularly Bangalore's IT sector, but mainly from the perspective of how it grew, how it has leveraged existing economic resources, how it has developed and fine-tuned the model of outsourcing, and how structures of labour laws, economic incentives, historical conditions, and labour mobility have helped the industry grow. Very few though have looked at IT workers and their nature of work. Very few have asked who these workers are, how they thrive in this industry, what their concerns are, how they are being moulded by their work, and how they cope with the stringent work requirements of this global industry.

IT industry it is an outpost of the Global Economy seeks to ask and answer fundamental questions about the nature of work in the IT industry, the manner in which the work begins to shape the subjectivities of IT employees, and finally how this shaping plays a role in defining the new emergent middle class in India. Employment in the IT industry has grown from a few thousand in the eighties to about two million in 2008; with the employment growing at

about 26% over the last decade. This represents a shift not only in the number of persons employed but also in the nature of the work they perform and, most crucially, the salaries they draw and the life styles they can afford. Never before in India have such a large number of college graduates been hired in such large numbers by companies that offer above average salaries and assured foreign trips. These jobs offer a vastly different perspective on life and work than was lived by the middle-class before. The new middle class has the same demographics of the older middle class, but also, it has significant differences. Born in the socialist, 'scarcity' mindset era the parents of this new class are coming to grips with children who don't believe in saving money, are getting high paying jobs right out of college and are maintaining a highly consumption oriented lifestyle that they couldn't even dream of. Gone are the days of the nine-to-five secure job in a public sector organization or in the government, with low pay but high security and a well-known, slow-paced career path that came with few uncertainties and possibly, many frustrations. The new IT employee looks forward to long hours at work, the possibility of working on multiple projects simultaneously, being moved about within the workspace, working abroad for long stretches, drawing a large salary and then being able to negotiate higher salaries with different companies. Career paths are not sketched out in advance; there is uncertainty but also the excitement of availing newer and better opportunities.

Within the gilt cover of this career promise is the hard, often contradictory, lived reality of the IT professional, whether in the software

industry. A high salary entails a consumerist lifestyle with its attendant requirements for competing on cars and flats and brand name clothing, a struggle that is always a losing battle as 'making it' also means looking up to see that someone else has 'made it' further. The industry is based on a working definition of 'merit' and identities such as caste and social standing have receded, however, the meritorious find that their personal life has blended with the professional, along with high stress levels. The IT profession has sprouted suicides, divorces, cardiac ailments, and depression, apparently more than its proportionate share. Along with the access to international travel and the ability to mingle with people of different cultures has also arrived the deep isolation of late hours, no social life outside of immediate family, no hobbies, and few and brief vacations. There is also the loss of job security; employees have to perform and deliver on projects on time to retain their hold on jobs; they also have to refresh their skills constantly, often under pressure of an immediate project deadline. The most interesting aspect of the impact of the industry on IT professionals is on their 'subjectivities'. This notion includes their sense of their self, their cultural identity, their sense of location within a personal and professional space, and their ability to negotiate their 'Indianness' within international work teams. This impact follows from the corporate attempt to create a globalized work culture that ostensibly believes in openness, flat hierarchies, team work and individual initiatives. When this clashes with perceived Indian organizational cultures of strict hierarchies, closed access and limited individual responsibilities, corporates often turn to a form of cultural

'engineering' or soft skills training through training programs and workshops. These workshops play on cultural stereotypes (Indians are hardworking but sloppy, tradition-bound, religious, etc, as compared to Americans), and encourage participants to change their habits of work and conversation, along with subtle behaviors related to body language and non-verbal signals. The thrust of these suggested changes is one-directional, for the Indian employees to conform to the needs of their American clients and team-members. When challenged by employees, these recommended changes are defended as required for a globalized work place.

Indian IT women engineers often take pride in the fact that they are 'sloggers'. This is a deeply internalised belief: they work hard on projects, not bothering about late hours or weekends, they are committed to deliver on schedule, and they are willing to sacrifice family and personal life for the sake of the project. This attribute shows in on-site locations abroad, where Indian engineers feel compelled to work ceaselessly on projects while their local hosts follow strict work hours and take weekends off. Indian managers explain this as deriving from the 'entrepreneurial' and 'individualistic' work culture promoted by their organizations, whereas the criticism levelled against this is that Indian IT professionals are careless, don't manage time well (hence, have to work longer hours), have to be micro-managed on small tasks, and managers extract longer hours to keep down the billing rate.

Training workshops are very popular in the industry. At one level they address the needs of modern management theory that stipulates that a 'fit'

between employee goals and corporate goals best serves the needs of both, prompting organizations to make efforts to create these fits. At another level these workshops address the needs of the growing stress and imbalance created by the globalized nature of the work; Indian employees have to see themselves through the lens that, it is assumed, westerners view them; they have to reconcile the differences that appear easily surmountable through hard work and forbearance but that appear to morph into inexplicable work stress. What remains invisible in these training sessions is that much of the emphasis on change of the self and 'betterment' that are proposed are often stereotypes drawn from images of the western workplace.

This engineering of culture does not go unchallenged, though, for IT women employees constantly question workshop trainers about the canned and often rigid notions of Indian and western cultures that are used as justification. They dismiss the impact of the workshops by making light of the efforts of the trainers or asserting that such training cannot achieve anything, they suffer the sessions to pass time while on the 'bench' (a term used to describe the situation where an employee is not assigned to a particular project).

This study relies on ethnographic observation to show how women in a major IT firm in Chennai deal with their work lives and their homes. Joining and staying in the IT industry has meant breaking from and re-shaping strongly conservative and upper-caste views on what professions women should take up, when they should marry, how they should choose a partner, and what they should do after child-birth. The movement away from the 'traditions' is not

revolutionary, as much as it is a long drawn out process of negotiations, compromises, and the gentle leveraging of the power obtained from material wealth.

The high salaries offered by IT companies have contributed to the emergence of new forms of social differentiation, based on the growing ‘urban dualism’ seen in major centres of the industry such as chennai, where there is an increasingly sharp and visible social and economic divide between those who work in the IT industry and those who do not. While the IT industry has generated downstream economic effects through the growth of ancillary service industries, the differentiation between IT workers and others is apparent and has generated social tensions. This is a trend that has been noted in the West as well, where the new informational economy has given rise to polarised labour markets, in which there are sharp differences between a segment of highly skilled and well-paid workers and those who are less skilled and work under insecure employment conditions. This pattern of ‘urban dualism’ is exacerbated in the Indian context, where a large proportion of workers remain outside the organised sector itself, leave aside the high-tech globalised ‘informational economy’.

The global or transnational nature of the IT/ITES industry -- the fact that its women workers are engaged in ‘virtual’ work with customers located in the developed countries and also travel abroad frequently – has created another form of dualism, in which this sector is more closely connected with the global economy than with the local/ regional economies of the places where it is

located. The exclusion of a substantial section of the population from the benefits of IT's highly visible success has created resentment and political resistance in some quarters. In Chennai, more than in other Indian cities, the IT industry is never far from the political agenda or from political controversies, in part due to the widespread perception that the IT industry has not benefited the rural women or the majority of the urban women population, but is only enriching a few educated and technical elites and foreign companies.

In the new global workplaces that have emerged within the software services outsourcing and business process outsourcing industries, the forms of work, the nature of employment relations, the labour market, and the cultures of work are all substantially different from those found in the 'old economy' – although there are also significant continuities. The dominant management ideology in the IT industry, which extols flat structures, lack of bureaucracy, networked organisation, and employee empowerment, caters to the demand for flexible, mobile, and self-motivated workers. These new organisational forms have been imported into the outsourced economy in India, but in the process they have been transformed due to the compulsions of outsourcing and the offshore model, with specific outcomes for the nature of work and for workers. While the ideology of management in the new workplace stresses worker autonomy and self-management, new forms of direct or 'panoptical' control over the work process have emerged in the software services industry. This development is linked to the rationalisation of the work process in large software projects through the use of modular programming techniques, 'global

service delivery' models, and the application of international quality processes. From the company perspective, the rationalisation of software work increases efficiency and productivity through continual monitoring of the work process and use of employees' time. But from the individual software engineer's point of view, the process-driven nature of IT work reduces the scope for individual initiative and creativity. Overall, rationalisation of the work process appears to lead to the deskilling of workers and routinisation of work, apart from imposing rigid controls and structures that contradict the articulated management ideology of women employee empowerment.

The introduction of process-driven management systems in software companies is a direct outcome of the outsourcing relationship, which compels service providers to compete for customers on the basis of perceived quality (and low cost). In order to soften the routinisation created by 'process orientation', which often gives rise to resentment, these companies also employ 'normative' or subjective management techniques. These techniques, based on theories of corporate culture and teamwork, are designed to create a sense of belonging and camaraderie among employees, as well as an illusion of empowerment, and to motivate them to put in extra effort and time. This combination of direct and indirect systems of organisational control allows companies to maximise productivity, but it also contains a contradiction: employees are expected to transform themselves into individualised, self-managed and self-directed 'entrepreneurial' workers, even while they must also

perform within a tightly controlled and impersonal management system that tracks their every move and moment.

The blending of ‘panoptical’ or Taylorist systems of control over the work process with subjective techniques is most evident in the business process outsourcing industry. The attractive working environment of call centres, with their ‘hip’ managers and continuous fun activities on the floor, effectively mask the closely regulated and monitored nature of work. The factory-like, computer-controlled system not only manages the call flow and the entire work process, but also monitors and records the use of each minute by employees. These panoptical systems of control allow management to continually rate employee performance and thereby extract ever higher levels of productivity, creating ‘cyborg’ workers who are completely welded to their workstations. On the surface, the nature of work and the profile of the workforce are very different in IT and ITES, giving rise to different employment issues, yet there are some commonalities especially the ideology of ‘fun’ at work, the strategy of ‘illusory empowerment’, and the combination of techniques of normative control in tandem with more direct methods of worker regulation.

Another distinctive feature of work culture in the Indian software outsourcing and ITES industries is the deployment of *culture* itself as a management tool and as a mechanism of control over labour. Culture operates at several levels – in the form of deliberately manufactured corporate cultures through which employees supposed to be incorporated into the collectivity, imbued with corporate values, and oriented to the corporate ‘mission’; in the

techniques and theories of ‘cross-cultural’ management that are deployed to manage and coordinate culturally diverse and virtual teams; and in the ‘cultural sensitivity’ training programmes that aim to teach Indian women software engineers to communicate and interact effectively with non-Indian customers and colleagues. In these new global workplaces, national cultures are being redefined and leveraged in specific ways, for instance through the stereotyping of the ‘Indian techie’ in terms of particular work habits. Even while they are labelled and slotted as ‘Indian women software engineers’ with specific characteristics within the global software labour market, employees are trained and urged to adapt to a singular model of ‘global corporate culture’ that dominates the space in which they operate. They are asked to be at once ‘global’ in some respects, such as communication style, but are also assigned ‘Indian’ characteristics on other counts. Both the ‘Indian’ and the ‘global’ are defined through management discourses and strategies. The transnational or global natures of work in these industries, along with the deliberate deployment of cultural strategies of control by companies, have implications for the production and reconstitution of the social identities and subjectivities of workers.

The process of women individualisation has been identified as a key feature of workers and work in the ‘new economy of the West’ is also seen in the IT industry in India. Workers are required to be flexible and mobile, and also continually reinvent themselves in order to compete in the job market. But career planning and life planning presuppose a fairly stable economy and job

market features that are absent in the IT industry and in the global economy generally, due to the high rate of mobility of capital and labour. In this context, software professionals cannot predict what kinds of jobs will be available in ten years, or where they might be even though they may plan a particular career path in management or as a technical expert. In this context, as in the post-industrial societies of the West, the management of risk becomes a central cultural concern. Uncertainty feeds into the sense of restlessness and the dream of another career that is so common. A chance to do what one really wants to do, some day. Second, in the new economy, workers are required not only to plan and manage their own careers as individuals, but also to plan and manage their lives in the same way. Soft skills training programmes offered by companies in time management, self-actualisation, personality development, assertiveness training, emotional intelligence, and communication skills are aimed at producing self-managing and autonomous workers who are also self-directed, goal-oriented, and autonomous individuals. Providers of psychological counselling and spiritual training become guides in this process of creating a self-disciplined subject.

Globalisation, viewed through the lens of the IT, appear to be producing somewhat contradictory cultural effects: on the one hand, new forms of modernity are emerging (for instance, the process of individualisation discussed above), while on the other a process of reaffirmation of ‘tradition’ appears to be working as IT workers rediscover their own ‘Indian culture’ through the medium of cross-cultural training programmes (which dichotomise

India and the West), exposure to other cultures in the workplace, or even through the sense of nostalgia that is associated with the dramatic shifts in their lives. In this context, Indian culture has been redefined in specific, rather simplistic ways, for instance in terms of 'family values' yet most the IT professionals who espouse devotion to family are unable to fulfil what they regard as their social obligations. A sense of loss and nostalgia for an earlier form of sociality, dense with networks of family, kin and friends, pervades the self-reflective narratives of IT workers and points to a real shift in the nature of sociality in this class. While the 'joint family' is being reconstituted as a child care provider for busy working couples, the content of family and gender relations within the family has been substantially altered, giving rise to inter-generational tensions and other kinds of conflicts. For instance, the apparent 'emancipation' of women working in the IT industry has not been matched, in most cases, by liberation in the domestic sphere.

Rather, the hectic lifestyle of IT professionals tends to reinforce traditional gender equations as one spouse (always the woman) is constrained to stay home and cover for the absence of the other. Thus, a new form of social conservatism is emerging within this group of global professionals, in spite of their claims to being more 'liberal', 'aware', and 'tolerant' than their own parents. The peculiar blend of international 'exposure', high incomes, and time-challenged lives appears to have the effect of consolidating 'traditional middle class values', albeit within the new consumerist culture.

Identity within this group of upwardly mobile ‘global’ professionals is moulded in part by a new discourse about Indian culture and tradition that is circulating within the global cultural economy. This discourse contains several strands: India as an ancient land with a long tradition of science and mathematics, which is invoked to explain its current prowess in the field of IT; India as a rising economic power that will soon overtake the West (along with China), once it is freed from the vestigial shackles of the planned economy; Indian society as a happy mixture of tradition (adherence to family values and spirituality, to ‘Indian culture’ itself) and modernity (opening to the world, leading in the development of new technologies); and the new global professional as embodiment of this successful negotiation between the different worlds of the global workplace and home, the customer in the West and the boss in India. But these celebratory narratives about IT that circulate among IT elites, the media, and certain public intellectuals are at odds with those of many individual IT professionals, who are struggling to make sense of the contradictions they face in forming a stable sense of identity in an unstable and rapidly changing world. Indian IT workers, more than most other social groups, are at the ‘cutting edge’ of globalisation; but their location and movement within different circuits of economic and cultural flows, and their interstitial position between India and the new global economy, has given rise to new but still inchoate subjectivities, orientations, and dilemmas.

Women engineers who reported to be the most satisfied with the careers worked in companies that not only valued and recognized their contributions

but also invested substantially in their training and professional development. These women also received substantial support from their family and friends which elevated their levels of career satisfaction. These women had clear, identifiable set of task goals, responsibilities, and expectations to work with; they also felt confident in their abilities to navigate the political landscape in their companies and manage multiple life role responsibilities. Furthermore, successful women engineers reported working in companies that supported their efforts to balance their work-life responsibilities.

It can be concluded that the women of Tamilnadu is empowered through the help of information technology. It has changed their position from the past. Tamilnadu as a technologically advanced state in India is also doing a lot of projects for the women in general and village and illiterate women in particular. It has also taken several steps and implemented various plans and policies along with government of India to eradicate poverty and bring the women into the IT related industry.