CHAPTER III

CONCEPTUAL FRAMEWORK

AND

INDUSTRIAL PROFILE
## CHAPTER - III

CONCEPTUAL FRAMEWORK AND INDUSTRIAL PROFILE

<table>
<thead>
<tr>
<th>Chapter No.</th>
<th>Topic</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Communication</td>
<td>40</td>
</tr>
<tr>
<td>3.2</td>
<td>Individual Goal / Team Goal / Clarity In Goal</td>
<td>42</td>
</tr>
<tr>
<td>3.3</td>
<td>Team Cohesion And Trust</td>
<td>43</td>
</tr>
<tr>
<td>3.4</td>
<td>Interdependence</td>
<td>44</td>
</tr>
<tr>
<td>3.5</td>
<td>Team Norms</td>
<td>45</td>
</tr>
<tr>
<td>3.6</td>
<td>Team Size And Composition</td>
<td>47</td>
</tr>
<tr>
<td>3.7</td>
<td>Team Leadership</td>
<td>50</td>
</tr>
<tr>
<td>3.8</td>
<td>Organizational Context</td>
<td>52</td>
</tr>
<tr>
<td>3.9</td>
<td>Work Design</td>
<td>53</td>
</tr>
<tr>
<td>3.10</td>
<td>Job Satisfaction</td>
<td>55</td>
</tr>
</tbody>
</table>

### CONCEPTUAL FRAMEWORK

### INDUSTRIAL PROFILE

<p>| 3.11        | IT – ITeS Industry in India                   | 57       |
| 3.12.1      | The Reasons for India’s success in IT – ITeS Industry | 61   |
| 3.12.2      | Breadth of service offering                   | 61       |
| 3.12.3      | Cost advantage                                | 62       |
| 3.12.4      | Quality/ maturity of processes                | 62       |
| 3.12.5      | Ease of scalability                           | 62       |</p>
<table>
<thead>
<tr>
<th>Chapter No.</th>
<th>Topic</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.12.6</td>
<td>Government initiatives to encourage IT-ITeS in India</td>
<td>63</td>
</tr>
<tr>
<td>3.13</td>
<td>IT/ITeS Estimation for the future</td>
<td>64</td>
</tr>
<tr>
<td>3.14</td>
<td>IT/ITeS Destinations in India</td>
<td>66</td>
</tr>
<tr>
<td>3.15</td>
<td>The financial performance and Work force of leading Indian IT/ITeS firms (by revenue 2007-08)</td>
<td>67</td>
</tr>
<tr>
<td>3.16</td>
<td>Future IT-ITES Manpower Requirements</td>
<td>68</td>
</tr>
<tr>
<td>3.17</td>
<td>IT/ITeS – Workforce Challenges</td>
<td>69</td>
</tr>
<tr>
<td>3.18</td>
<td>Team Work in IT/ITeS</td>
<td>71</td>
</tr>
<tr>
<td>3.19.1</td>
<td>Infosys Technologies Limited</td>
<td>72</td>
</tr>
<tr>
<td>3.19.2</td>
<td>Google India</td>
<td>73</td>
</tr>
<tr>
<td>3.19.3</td>
<td>Tata Consultancy Services (TCS)</td>
<td>73</td>
</tr>
<tr>
<td>3.19.4</td>
<td>IBM</td>
<td>74</td>
</tr>
<tr>
<td>3.19.5</td>
<td>Microsoft India</td>
<td>76</td>
</tr>
<tr>
<td>3.19.6</td>
<td>Wipro Technologies Limited</td>
<td>77</td>
</tr>
<tr>
<td>3.19.7</td>
<td>State Bank of India</td>
<td>78</td>
</tr>
<tr>
<td>3.19.8</td>
<td>Bharti Airtel</td>
<td>79</td>
</tr>
<tr>
<td>3.19.9</td>
<td>HP</td>
<td>79</td>
</tr>
<tr>
<td>3.19.10</td>
<td>HDFC</td>
<td>79</td>
</tr>
</tbody>
</table>
CHAPTER III
CONCEPTUAL FRAMEWORK AND INDUSTRY PROFILE

A conceptual Framework is a representation of an idea or body of knowledge based on the understanding of literature reviews. A conceptual framework is described as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Reichel & Ramey, 1987)\(^1\). In this chapter various concepts and models of team effectiveness is discussed.

Most companies and organizations have people working in teams. This has been found to be more effective and productive than a single individual toiling away at a project. In team work, there is an advantage of having access to more ideas and solutions for a project, of having more checking safeguards against any flaws in the plan, and of being able to establish more network connections. A group is also more likely to take on and complete large-scale, complex projects (Sonal Panse, 2010)\(^2\).

Based on the literature review, the following are found to be the characteristics of a work team.

3.1 COMMUNICATION

For a team to operate smoothly there must be open and efficient communication among the members of the team. Open communication must exist between team members and the department supervisor(s) if the team is to remain effective. The team cannot grow and maximize its effectiveness if people are not open and truthful. Communication is a two-way street. Team members should be expected to not only share opinions and ideas, but also be open to feedback (Team Work, 2010)\(^3\).

Team effectiveness is reliant upon team communication. The quality of the team's work, to a large extent, depends upon the quality of the information
shared. The ability of team members to understand and communicate information enables them to work together collaboratively. Almost all aspects of team communication involve feedback - giving and receiving information about team-related experience.

In short one can say that team communication is important for the following reasons:

- Project-related information needs to be shared.
- Each member of the team needs to be acquainted with the team goal and his/her role in the team.
- Each team member has specific skills and knowledge that must be utilized and imparted to other members in the course of the work.
- Any questions or issues about the project must be broached and shared in order to resolve them.
- Any decisions taken must be imparted to all the members.
- Effective and open communication lines create feelings of trust and of belonging to the team. The more the members feel valued the more dedicated they are likely to be, and this in turn makes it easier for the team as a whole to achieve its goals.

On the other hand, poor communication between team members can unnecessarily ruin an entire project.

- The members may not understand what is needed and may waste time and energy in doing what is not required.
- The members may misunderstand one another and develop personal animosities. This can affect their desire to work together and thereby the quality of work.
- The members may not be clear of the sequence of the things to be done and this can either hold up the project or play havoc with the deadlines.
- The members may not know what to change or how to change to make themselves more efficient.

The team leader can foster effective team communication in the work team by a mix of old-fashioned good manners, good attention and open-mindedness.
3.2 INDIVIDUAL GOAL / TEAM GOAL / CLARITY IN GOAL

In order to operate effectively, a team must have stated goals and objectives. These goals are not just understanding of the immediate task, but an overall understanding of the role of the group in the total organization, its responsibilities and the things the team wants to accomplish. In addition, the members of the team must be committed to the goals. Such commitment comes from involving all team members in defining the goals and relating the goals to specific problems that are relevant to team members. The time spent on goal definition in the initial stages of a team’s life results in less time needed later to resolve problems and misunderstandings (Alexander, M. 1985).  

Since employees spend the majority of their waking hours on the job, they expect to fulfill most of their personal needs while working. When employees can reach personal goals while they help the organization reach its goals, they become highly motivated and make outstanding results possible. A highly motivated team achieving personal and organizational goals generates outstanding results and builds strong competitive advantage for the organization (Tom Northup, 2007).  

In order to meet the organizational goals, individual goals first need to be met. And meeting up with individual goals requires effective planning and streamlining of processes to finally lead the organization towards business success. Goals must be set out clearly. The goals should be such that it should yield profits and must be quantified so that they can be measured. Once the goals are defined, certain methodology has to be adopted in order to streamline each process. The organizational goals are linked to mission statement so each employee should be made the importance of the mission statement understood. Each employee should set the individual targets from himself and work towards the individual objectives as set by his superior (Anonymous, 2009).
Team goals help to establish expectations and deadlines. This subconsciously establishes the system needed to carry out the tasks. It's impossible to expect proper system without a goal or mission statement for the group. If the team sticks to the goals and deadlines, they become more organized and structured compared to a group that does not.

Team goals are goals are achieved with more than one individual. There are several benefits and several possible problems with a team situation. Individuals must find the fine line between delegating, being sympathetic to one's needs and working together while still remaining strict and accountable. The bar is to set at height to push everyone in the team, but not so high that the expectations are not realistic. The leader needs to realize the difference between liberty and license.

Although this is not always certain, one may hope that a team situation with carefully crafted goals will lead to strong leadership and each individual will follow her role for the team. Out of this group, one or more leaders must emerge. It has been proven many times that those who set goals are much more likely to achieve success compared to those who do not set goals. (Aaron Reynolds, 2010)⁷

3.3 TEAM COHESION AND TRUST

Relationship between team cohesion and performance is primarily co-relational rather than causal. Cohesive teams are more productive than are less cohesive teams and this could be because 1) more productive teams become more cohesive or 2) more cohesive teams become more productive. Teams preserve their cohesion when they succeed rather than fail. (Wiki books 2010)⁸

In any team situation, disagreement is likely to occur. The ability to openly recognize conflict and seek to resolve it through discussion is critical to the team’s success. People do not automatically work well together just because they happen to belong to the same work group or share the same job function.
For a team to become effective, it must deal with the emotional problems and needs of its members and the interpersonal problems that arise in order to build working relationships that are characterized by openness and trust. The creation of a feeling of mutual trust, respect, and understanding and the ability of the team to deal with the inevitable conflicts that occur in any group situation are key factors in team development. (Mark Alexander, 1985)⁹

Trust is also fostered and enhanced between team members when team members make mutual commitments and meet or exceed those commitments. The establishment of a team contract which explicitly defines the parameters of follow-up between team members can provide a mechanism for building trust as it defines the ‘rules of engagement’ between team members, and lessens the possibility of misunderstanding team member expectations regarding task management.

The bottom line is that trust is key to a cohesive team, and cohesion is the key to team success. (Wiki books 2010)¹⁰

3.4 INTERDEPENDENCE

Lots of people work in groups that are not really teams. A key factor which differentiates teams from work groups requires the interdependence of people. “Interdependence opens up worlds of possibilities for deep, rich, meaningful associations, for geometrically increased productivity, for serving, for contributing, for learning, for growing. (Covey, Stephen R. 1989)¹¹

Organizational researchers reserve the term “team” for groups that have high interdependence—each task that they do, sometimes on an hourly basis, is dependent on what the other team members are doing at that same time. Some team tasks need high interdependence, while others don’t. Years of organizational research show that as the team becomes more interdependent, it needs more and better communication, and higher cohesion. That real teams
need what is called *group flow*—a state of peak performance that comes from close work, shared commitment to the goals, and pride in the team.

When teams are more interdependent, coherence and communication more strongly predict the team’s performance *and* the firm’s performance over the following year. There were two different kinds of teams. For teams that were highly interdependent, high coherence and good communication predicted both team performance and firm performance. But for teams that were not interdependent, low coherence and less communication was related to better performance. The top performing teams and firms were those with interdependent teams and high cohesion and communication; but the non-interdependent teams with low cohesion and communication only performed slightly worse.

Significant innovations always emerge from interdependent teams, and rarely come from teams low in interdependence. Innovations tend to come from teams that are high in group flow, high in cohesion and with constant communication. *(Keith Sawyer, 2007)*

### 3.5 TEAM NORMS

Team norms are a set of rules or guidelines that a team establishes to shape the interaction of team members with each other and with employees who are external to the team. Team norms can be developed during an early team meeting. More norms can be added as the team sees the need for additional guidelines.

Once developed, team norms are used to guide team member behavior. Team norms are used to assess how well team members are interacting. Team norms enable team members to call each other out on any behavior that is dysfunctional or that is negatively impacting the success of the team. A team without relationship norms leaves itself open to potential interpersonal
problems. Most team members won't intentionally harm the project or the team's success. But, the lack of an agreed framework for interaction creates the potential for misunderstanding and negative conflict.

Some of the team norms in interpersonal and team interaction are,

- **Team members as coworkers:** all team members are equal; every team member's opinion will be thoughtfully considered; each team member will keep all commitments by the agreed upon due date; each team member agrees to constantly assess whether team members are honoring their commitment to the team norms.

- **Team member communication:** team members will speak respectfully to each other; will not talk down to each other; will positively recognize and thank each other for team contributions.

- **Team member interaction in meetings:** team members will listen without interrupting; hold no side or competing conversations; follow the rules for effective meetings; attend the meeting on time; always work from an agenda; minutes will be recorded at each meeting; end meetings on time.

- **Team organization and function:** leadership will rotate monthly; the team management sponsor will attend the meeting, at least, monthly.

- **Team communication with other employees including managers:** team members will make certain that they have agreement on what and when to communicate; complaints about team members will be addressed first in the team.

- **Team problem solving, conflict resolution and decision making:** team members will make decisions by consensus, but majority will rule if timely consensus is not reached; conflicts will be resolved directly with the persons in conflict.
Team norms can encompass as many topics as the team deems necessary for successful functioning. With effective team norms in place, the team will be able to focus on its business purpose. (Susan M. Heathfield, 2009)

3.6 TEAM SIZE and COMPOSITION

Team size and composition affect the team processes and outcomes. The optimal size (and composition) of teams is debated and will vary depending on the task at hand. At least one study of problem-solving in groups showed an optimal size of groups as four members. Other works estimate the optimal size between 5-12 members. Less than 5 members results in decreased perspectives and diminished creativity. Membership in excess of 12 results in increased conflict and greater potential of sub-groups forming. (Wikipedia, the free encyclopedia, 2011)

David Cooperrider suggests that the larger the group, the better. This is because a larger group is able to address concerns of the whole system. So while a large team may be ineffective at performing a given task, Cooperrider says that the relevance of that task should be considered, because determining whether the team is effective first requires identifying what needs to be accomplished.

Most experts say that the ideal team size lies somewhere between 5-10 individuals. Over the years, there has been a lot of curiosity and research on this issue and there are several interesting finds pertaining to various business situations. Some of these findings are outlined below:

A study released in 2005 by Quantitative Software Management (QSM) on software projects showed that, assigning a large team on software projects does not necessarily result in any significant shortening of the project time. It can actually result in more defects. (Large teams means teams containing 20 or more individuals and small teams are those with 5 or less individuals).
According to author Stephen Robbins\textsuperscript{17}, when teams have more than 10-12 people, the team finds constructive interaction difficult. Teamwork principles of mutual accountability and cohesiveness that are necessary to achieve high performance become difficult in large teams. His advice to managers is to keep the team size to under a dozen.

Research on top management teams, by Katzenbach and Smith\textsuperscript{18}, shows that these teams are far more difficult to form. However, they fare better as real teams when they are small. As far as the success and performance of top management teams goes, it is the quality, capability and attitude of each member of the executive team that counts.

According to management consultant Kal Bishop\textsuperscript{19}, who studies ‘creativity management’, if the team gets larger it is likely to foster an unfavorable phenomenon known as group think, where the team members tend towards consensus rather than exploration of diverse ideas.

There are innumerable companies that conduct team building programs and games. Team building programs are usually designed to improve cohesion, trust, cooperation and collaborative work within teams. The ideal team size to achieve this objective seems to be five or six.

With regard to global, virtual teams, team size is not a major issue once a company creates proper systems in terms of connectivity, information sharing and shared processes. However, if the team becomes too large, say thirty or more people, research shows that it becomes difficult to maintain the focus. Karen Lojeski\textsuperscript{20} has researched this topic and advises managers that it is prudent to divide such large virtual teams into sub groups.

In a cross functional project team, the size of the team is dictated by the functions that have to be represented. So the team size varies by task. There is no model or an idea as far as team size goes. But it is well accepted that team size is certainly a factor in team performance.
A small team size of less than five people, even as small as two to three individuals can be extremely effective on a task, as long as the team members have a strong commitment to the shared vision, determination to succeed and the willingness to stretch themselves and put in extra effort (Anonymous, 2010)\(^1\)

Regarding composition, all teams will have an element of homogeneity and heterogeneity. The more homogeneous the group, the more cohesive it will be. The more heterogeneous the group, the greater the differences in perspective and increased potential for creativity, but also the greater potential for conflict. (Ken Blanchard 2005)\(^2\)

Teams composed of individuals with different characteristics have the potential to reach better decisions because they access more varied information sources. Heterogeneous groups also have a higher propensity for preferring different projects. Heterogeneous teams generally have an advantage over homogeneous ones in highly uncertain situations and when the stakes in the decisions are high. The team leader’s ability to handle and familiarity with the issues at hand also affect the composition of the team. Leaders at the extremes of the scale, either very good or knowledgeable on the one hand or incompetent or ignorant on the other hand, tend to form homogeneous groups. Leaders between these extremes benefit significantly from the input of less correlated information arrival and therefore prefer heterogeneous groups. Firms can avoid negative consequences caused by the divergence of preferences by giving the team leader authority to change the composition of the team in case of a conflict of interest. Because replacement is harmful, team members respond to the threat of replacement by staying quiet. Ultimately, the threat of replacement can promote conformance, which eliminates the benefits of heterogeneous teams. Still, heterogeneous groups display higher turnover. (Antonio S. Mello, Martin E. Ruckes, 2006)\(^3\)
3.7 TEAM LEADERSHIP

Team leaders play a very important role in the development and encouragement of a team. It is their job not only to ensure that the standards of their team are high and the tasks that have been assigned are being done, but also to ensure that the team spirit and morale of their team is kept.

Some of the main characteristics of a team leader are:

1: They need to have the ability to inspire a team.
2: They should be responsible and dependable.
3: It is very important that a team leader can recognize and acknowledge the contributions and ideas of their team members.
4: That they can celebrate the accomplishments of their team.

Here are some tips on how to be a good team leader:

1: Provide team leadership and coaching. It is important that he sets a good example to the team. He should always try to encourage the group through dexterity and constant improvement in their work. And always try to recognize the accomplishments and performances of the team.

2: Try to ensure that criticism is constructive. When he is reporting back to a person in authority, he should try to highlight the good points as well as the bad points and try to supply distinct suggestions on how to solve these problems that have lead to bad performances.

3: If he is positive, then his enthusiasm will give the team a lot of encouragement. Motivation is a very important characteristic of a team leader. If the team is at a low point, he should try to motivate them. Setting targets and having prizes for the winners can be an excellent form of encouragement. He should always listen to what the team has to say and by having a meeting every now and then he can take in their ideas. It is very important to value these ideas.
4: He should try to train the team. If he constantly does the job for the team member they will find it very hard to learn and they may become dependent on him. It can also hinder a team members confidence and skills.

5: A team leader needs to be very committed to their job. They may need to work extra hours or be available at short notice. They have to be committed to their team and ensure that the standards of performance are kept at a high level.

There are many ways that a team leader can kill team spirit:

- If he is critical of his team he may discourage team members and thus cause tension.

- He should never talk about team members behind their backs. This may cause them to distrust him and it could also form a barrier between him and his team.

- He should not speak unfairly or badly about people in authority. Not only does it reflect badly on himself but it could also cause him to lose his job.

- It is important that he tries to get to know all of his team members. He will be highly valued by his team if he shows that he is interested in what they have to say. If he fails to get to know members of the team it may make them feel that their hard work is not appreciated.

- And finally, he should never make others look bad. He should always take the blame for his mistakes. If he leaves it for his team members to pick up after him, it only reflects badly on him. It may be the easy way out to blame others but he should remember that to build a barrier
between himself and his team is only killing the team spirit which is crucial if he wants his team to perform well.

It may take some time for him to build up a strong team but he should never give up. If he acts as a good team leader, his team will eventually be there for him through the good times during his career and also the bad. *(Sarah Coppin, 2007)*

### 3.8 ORGANIZATIONAL CONTEXT

The teams are part of the larger organization system. All teams rely on resources inside and outside the group to sustain it and a scarcity of resources directly reduce the ability of the team to perform its job effectively. One of the most important characteristics of an effective team is the support it receives from the organization. This support includes timely information, proper equipment, adequate staffing, encouragement and administrative assistance. A team must receive the necessary support from management and the larger organization if it is going to succeed in achieving its goals. *(Kay Dora Abd Ghani 2009)*

It is found that, three organizational systems have particularly high leverage in supporting teamwork: the reward system, the information system, and the educational system.

The reward system should provide recognition and reinforcement contingent on excellent team performance. When a reward system does that, it reinforces the motivational benefits of challenging direction and well-designed teamwork. Moreover, it demonstrates to the team that others in their organization (specifically, those who designed the reward system and administer it) care enough about a team’s performance that they are willing to expend organizational resources to recognize what it accomplishes. Recognition for good team performance encourages members to think of “us” rather than “me”
and goes a long way in helping to sustain collective motivation. When a team receives something that members collectively value, it becomes more likely that members will do again whatever it is that they did before. Although compliments and nonmonetary rewards can go a long way in reinforcing team excellence, they cannot go all the way. At some point, people want to see some cash—or at least feel they have a piece of the financial action. Providing financial rewards for team excellence is far easier said than done in most work organizations. (Zahnis, Richard A, 1990)²⁶

3.9 WORK DESIGN

Team work designs can be defined as the recognition of the opportunity to use different skills and talents, the ability to complete a whole and identifiable task or product, and working on a task or project that has a substantial impact on others.

Team effectiveness is directly linked to the interest that the group has on the project. If the job is too easy or too difficult, or if the rewards for achieving the end result do not seem worth the effort, the team may end up working half-heartedly in the project. The task should also have a clear outcome. Working towards a specific goal enhances team effectiveness significantly.

The work design category includes variables like freedom and autonomy, the opportunity to use different skills and talents (skill variety), the ability to complete a whole and identifiable task or product (task identity), and working on a task or project that has a substantial impact on others (task significance). Evidence indicates that these characteristics enhance member motivation and increase team effectiveness. The elements of work designs are autonomy, skill variety, task identity and task significance.

Burnout can be a factor with high performance teams, primarily due to increased workloads and insufficient recognition for excellent performance.
Effective strategies include reexamining work design, assessing priorities, re-allocating tasks and workloads, refocusing on effectiveness, and eliminating unnecessary work. (O'Brien, Maureen. 1995)\(^{27}\)

One of the key factors in good job design is job enrichment. Hackman and Oldham identified five factors of job design that typically contribute to people's enjoyment of a job:

- **Skill Variety** – Increasing the number of skills that individuals use while performing work.
- **Task Identity** – Enabling people to perform a job from start to finish.
- **Task Significance** – Providing work that has a direct impact on the organization or its stakeholders.
- **Autonomy** – Increasing the degree of decision making, and the freedom to choose how and when work is done.
- **Feedback** – Increasing the amount of recognition for doing a job well, and communicate the results of people's work.

Job enrichment addresses these factors by enhancing the job's core dimensions and increasing people's sense of fulfillment.

The central focus of job enrichment is giving people more control over their work (lack of control is a key cause of stress, and therefore of unhappiness.) Where possible, allow them to take on tasks that are typically done by supervisors. This means that they have more influence over planning, executing, and evaluating the jobs they do.

In enriched jobs, people complete activities with increased freedom, independence, and responsibility. They also receive plenty of feedback, so that they can assess and correct their own performance. (Anonymous, 2009)\(^{28}\)
3.10 JOB SATISFACTION

Tackling workload produces results that are gratifying to managers, team members and customers. Deloitte used the team-based process with client engagement teams, resulting in greater team effectiveness, communication, morale, and satisfaction of both clients and team members. The leader of a team that had previously experienced high turnover and low morale remarked that his team is very pleased with the increased flexibility, work-life balance and enhanced effectiveness of the team in working together with their clients. In fact, many have indicated a desire to join the same team again after the completion of project. *(Bill Munck 2001)*

The effort to increase performance leads to improved productivity and members’ satisfaction within the team. In the workplace, supervisors are faced with changing attitudes on a regular basis. Given the effect of attitudes on performance, it would be best way for supervisors to check and promote positive approach within the working environment to ensure performance is not hindered. A positive example of an attitude in the workplace is job satisfaction, i.e. the extent to which an individual is satisfied with their job. This attitude results from the individual’s perceptions and the extent to which the individual’s goals and organisation’s goals coincide. Staff development – training and coaching exercises also contribute in improving job performance therefore improving job satisfaction.

Employees in an effective team take more pride in their work, are more productive, provide higher levels of customer service, better quality and less waste when compared to employees that work without a team structure. In a nutshell, a good team fosters happier employees who get more accomplished. It has been proven time and again that wages are typically not the reason employees leave jobs. Feeling appreciated and being a valued part of the team go a long way toward job satisfaction. *(Teamwork, 2010)*
A report of the Society for Human Resource Management following its annual conference and exposition in Las Vegas shows up interesting data, HR professionals rate relationships with managers higher in determining a worker's job satisfaction than employees themselves do. Compensation and benefits are the factors that most heavily influence whether someone likes his or her job and 79 percent of the respondents in SHRM's 2007 Job Satisfaction survey are happy at work.

The top five issues rated as “very important” by employees are

- Compensation
- Benefits
- job security
- work/life balance and
- Communication between them and management.

HR staff, meanwhile, rated their top five as

- relationship with immediate supervisor
- compensation/pay
- management recognition of employee job performance
- benefits and
- Senior management-employee communications.

Employees ranked management recognition of their performance and their relationship with their immediate supervisor as the seventh and eighth most important influences on job satisfaction. (Anonymous, 2010)

INDUSTRY PROFILE

In 2008-09, the worldwide spending on IT/ITeS was estimated at nearly US$ 1.6 trillion. Increased reliance on IT for operational cost control, increased requirement of IT for quality and regulatory compliance, large scale
recruitment, variable pricing in service sector businesses are considered to be the factors leading to the sector’s sustained growth.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Growth (per cent)</th>
<th>Aggregate (US$ bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td>4</td>
<td>594</td>
</tr>
<tr>
<td>Software</td>
<td>30</td>
<td>295</td>
</tr>
<tr>
<td>Services (IT)</td>
<td>5</td>
<td>557</td>
</tr>
<tr>
<td>Services (BPO)</td>
<td>12</td>
<td>115</td>
</tr>
</tbody>
</table>

Source: IT: Industry profile July 2009, CRIS INFAC

Spending on technology (on hardware) of Brazil, Russia, India and China (BRIC) together accounted for US$ 110 billion in 2008-09. BRIC spending is estimated to contribute nine per cent of global technology spending during 2008-09. (IDC, 2009)\textsuperscript{32}

3.11 IT – ITeS Industry in India

During 2008 – 09, India has entered into many multi – vendor contracts and long term off-shoring contracts. To name a few,

Subex won a US$ 50 million deal with British Telecom, Mind tree Consulting won a US$ 50 million deal with Arcelor Mittal, Tech Mahindra won a US$ 700 million deal with BT to provide systems and process transformation, Infosys won a five year contract with US insurer Consecio and Wipro won a nine year IT infrastructure management deal with Aircel, estimated at US$ 500 million. (IBEF, 2009)\textsuperscript{33}

The combined India domestic IT-ITeS market is expected to grow at 15 per cent in 2012 to achieve revenues of Rs.1,20,666 crore compared to Rs 1,04,906 crore in 2009. The domestic IT market is expected to grow at 13 per cent in 2012 to touch Rs.1,07,655 crore, while the domestic ITeS market is expected to post revenues of Rs.13,011 crore, a growth of 35 per cent. The release said the
combined India domestic IT and IT-enabled Services grew by 5.4 per cent in 2009 have reached Rs.1,04,906 crore compared to Rs.99,654 crore in 2008. (ICT, 2010)\textsuperscript{34}

The Industry has improved to provide a soaring share of voice-based services and a variety of back-office processing activities. Range of services provided by IT and ITeS sector have extended in the last three to four years to include progressively more intricate processes relating rule-based decision making and investigating services requiring knowledgeable individual conclusions.

The total revenue for the Indian IT industry was US$ 71.7 billion in 2008-09. The Indian IT industry has been growing at a compound annual growth rate (CAGR) of 27 per cent for the last five years. Contribution of IT industry to India’s gross domestic product (GDP) has grown from 1.2 per cent in 1997-08 to an estimated 5.8 per cent in 2008-09. The total revenues from export have reached US$ 47.3 billion in 2008-09. The total exports have been growing at a CAGR of 28.7 per cent over the last five years. During this period 2008-2009, direct and indirect employment has reached approximately 2.23 million and eight million, respectively. Domestic market revenues have touched approximately US$ 24.3 billion in 2008-09. Domestic market revenues have been growing at a CAGR of 24 per cent for the last five years. (NASSCOM, 2009)\textsuperscript{35}

Indian IT/ITeS sector (IBEF, 2009)\textsuperscript{36} has developed significantly with its,

- Growth into varied verticals
- Well distinguished service offerings.
- Ever-increasing geographic diffusion
- India’s importance among emerging markets, both as a supply and demand centre, is stimulating further IT/ITeS growth
- Continue to be one of the best emerging industries in India; while India maintains its leading position as a strategic off shoring target for multinationals globally.
- The Indian ITeS-BPO (domestic and exports) revenue was US$ 14.7 billion and the sector grew at a rate of 18.9 per cent in 2008-09.
The Indian IT services market grew by 23 per cent between 2005-06 and 2008-09 and the revenues are around at US$ 67.2 billion in 2008-09. The banking, financial services and insurance (BFSI) vertical continues to account for the largest share of IT/ITeS services at 41 per cent. Hi-Tech/ telecom vertical, account for the second-largest share at 20 per cent. Other verticals such as manufacturing, retail, media and healthcare are rapidly gaining pace. Domestic IT-ITeS market revenues have been growing at a CAGR of 23 per cent between 2005-2006 and 2008-09 and about US$ 24.3 billion in 2008-09. Domestic IT-BPO revenues grew by 24 per cent in and about US$ 2 billion in 2008-09. Hardware accounted for about 49 per cent of the total domestic IT-BPO spends in 2008-09. (CRIS INFAC, 2009)37

<table>
<thead>
<tr>
<th>IT services export revenues: (2008-2009) US$ bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project oriented</td>
</tr>
<tr>
<td>IT consulting</td>
</tr>
<tr>
<td>Systems integration</td>
</tr>
<tr>
<td>Custom application development</td>
</tr>
<tr>
<td>Network consulting and integration</td>
</tr>
<tr>
<td>IT Outsourcing</td>
</tr>
<tr>
<td>Application management</td>
</tr>
<tr>
<td>Infrastructure management</td>
</tr>
<tr>
<td>Support and training</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(Source: IT: Industry profile, July 2009, CRIS INFAC)

Exports accounted for 87 per cent of the revenues and grew at a rate of 18 per cent in 2008-09 to reach US$ 12.84 billion. Services exports account for nearly 57.7 per cent of total IT/ITeS sector exports in 2008-09. The concept of outsourcing is increasingly gaining acceptance even in the more conservative markets around the world. (CRIS INFAC, 2009)38 India was crowned by the A.T. Kearney Global Services Location Index 2009, surpassing 49 other
countries of the world, promising to be the destination of preference as an offshoring site of global IT/ITeS powerhouses.

<table>
<thead>
<tr>
<th>Country</th>
<th>Index on a scale of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>6.91</td>
</tr>
<tr>
<td>China</td>
<td>6.29</td>
</tr>
<tr>
<td>Malaysia</td>
<td>5.98</td>
</tr>
<tr>
<td>Thailand</td>
<td>5.77</td>
</tr>
<tr>
<td>Indonesia</td>
<td>5.69</td>
</tr>
</tbody>
</table>

India is expected to continue drawing substantial investments in the sector for another 10-15 years. India is emerging as a back end services location to the global innovation hub.

Source: *A T Kearney Global Service Location Index 2009*, AT Kearney website, www.atkearney.com
The Reasons for India’s success in IT – ITeS Industry

“The Indian IT-ITES industry is India’s largest employment generator in the organized sector of today creating jobs for over 7.5 million people both directly and indirectly, and is expected to cross 10 million by 2012. A varied combination of factors have led to this - healthy growth environment, attractive remuneration and different kinds of employment opportunities in the new economy based on varying skill sets, and above all the availability of talent in India which meets the employment projections. What we do need to work on is the quality factor to ensure we remain the highest employment generator and maintain our share of the global offshore IT and ITES industry.” (Kiran Karnik, 2008)\textsuperscript{39}

The Reasons for India’s success in IT – ITeS Industry are,

- Improving telecom and other infrastructure which is at par with global standards.
- Strong quality orientation among players and their focus on measuring and monitoring quality targets.
- Fast turnaround times and the ability to offer 24x7 services based on the country's unique geographic location that allows for leveraging time zone differences.
- Proactive and positive policy environment which encourages ITES/BPO investments and simplifies rules and procedures.
- A friendly tax structure, which places the ITES/BPO industry on par with IT services companies. (NASSCOM)\textsuperscript{40}

The other important reasons being,

3.12.2 Breadth of service offering

Service offerings have evolved from low-end application development to high-end integrated IT solutions. Range of services offered by leading players span a wide spectrum cutting across multiple verticals.
3.12.3 Cost advantage
Cost of an engineer is about 20–40 per cent of the comparable cost in European Union (EU). Selling, general and administrative costs approximately 80 per cent of comparable cost in EU. In India average offshore billing rate is at US$ 20 to 35 per hour which is about 50 to 70 per cent lower than EU. Among the top five global services locations, India sustains a substantive front with respect to the financial attractiveness index. Sourcing from India is anticipated to deliver cost savings in the range of 25–60 per cent for worldwide MNCs.

3.12.4 Quality/ maturity of processes
India is a host to more than 85 global SEI-CMM level five firms. The country is expected to host the highest number of ISO-certified companies. Companies are assertively investing in improvement and R&D to make a difference in their service offerings. HP, Microsoft, Cisco, Oracle, Motorola, Qualcomm are some of the leading IT giants who have set up their R&D centers in India. Process consulting services are increasingly becoming part of the end-to-end service requirements of clients. Patents and licenses filed by the Indian companies are increasing. The Intellectual Property Rights Law of India is now in compliance WTO’s Trade Related Aspects of TRIPS.

3.12.5 Ease of Scalability
The country produces 6,75,000 technical graduates per annum, out of which 4,00,000 are engineers. Over 50,000 MBAs are graduating per annum. Indian IT industry added 40,000 employees in 2009-10(ECONOMIC TIMES, 2009)\textsuperscript{41}
A report by Nasscom on talent and infrastructure in India says,

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Scalability</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dedicated, cost effective, quality real estate in the form of Software Technology Parks (STPI) and Special Economic Zones (SEZs)</td>
<td>• India's young demographic profile and academic infrastructure have potential to cater to the growing demand for IT-ITeS</td>
</tr>
<tr>
<td>• STPI infrastructure available across the country demonstrates government's support to the sector</td>
<td>• An estimated additional demand for 0.4 million IT and 1.4 million ITeS professionals by 2009-10</td>
</tr>
<tr>
<td>• High quality telecom infrastructure with cost of connectivity declining rapidly and service levels improving significantly</td>
<td>• India possesses an abundant talent pool producing close to 6,75,000 technical graduates per annum, of which 4,00,000 are engineers</td>
</tr>
<tr>
<td>• Real estate, air and road connectivity, hospitality registering impressive growth and providing supportive business environment to IT sector</td>
<td>• Industry stakeholders, including individual firms, associations are undertaking initiatives to address issues concerning suitability of talent</td>
</tr>
<tr>
<td>• Infrastructure availability is set to complement the industry growth, with the Government of India working towards capacity building</td>
<td>• Some such initiatives include</td>
</tr>
<tr>
<td></td>
<td>• National rollout of skill certification through NAC (NASSCOM Assessment of Competence)</td>
</tr>
<tr>
<td></td>
<td>• Setting up finishing schools in association with Ministry of HRD to supplement graduate education</td>
</tr>
</tbody>
</table>

**Source:** "IT industry may create 4.5 lakh jobs, says NASSCOM," Economic Times

### 3.12.6 Government initiatives to encourage IT-ITeS in India

Government has taken the following initiatives to motivate other countries to establishing IT – ITeS companies in India:

1. **Software Technology Parks of India (STPI)** was setup by the government in 1991 to provide:
   - Fiscal benefits like tax holidays to attract investment into the industry
   - Basic infrastructure
   - Single-window clearances for setting up Export Oriented Units (EOUs)

2. Sectoral de-regulation in the 1990s have allowed private sector and MNC participation, free market competition, adoption of new technology, improved service quality and reduction in tariff.

3. Relaxing the restrictions on FDI.

4. Appropriate fiscal reforms to facilitate overseas investments without any hassle.
3.13 IT/ITeS Estimation for the future

The combined Indian domestic IT and IT-enabled Services grew by 5.4 per cent in 2009 to touch revenues of Rs. 1, 04,906 crore compared to Rs. 99,654 crore in 2008. *India Domestic ICT Market Top 10 Predictions 2010 report by ICT market intelligence firm IDC India*, January 1, 2010, gives the following estimates,

- The new phase of market growth and development, termed as "Growth Phase 2.0" is evolving along trends that are quite different from the earlier phase, Growth Phase 1.0 (2003-08), during which the domestic market witnessed unprecedented growth, almost tripling in size from Rs.34,000 crore in 2003 to Rs. 99,564 crore in 2008, a compound annual growth rate (CAGR) of 24 per cent.

- Transformation of the consumer IT space: the metamorphosis of "Consumer 1.0" to "Consumer 2.0"

- "Consolidation" and "Leveraging" of IT and telecommunications infrastructure built in Growth Phase 1.0 to realize greater business efficiencies and launch innovative product / solution offerings for their end-customers development of new business models in Growth Phase 2.0 by both large and mid-size business enterprises.

- Increased adoption and acceptance of "game changing" technologies such as x-as-a-Service (where "x" could stand for Software, Infrastructure or Platform) delivered through the Cloud and Green Tech and 3G/BWA telecommunications networks.

- Government intervention in providing economic stimulus to lagging end-use sectors, most notably through the launch of large scale public infrastructure projects to unlock hitherto untapped market potential.

- Growth Phase 2.0, which started in 2009, will be built on the back of innovative services and solutions sought by consumers and enterprises alike. The technology behind these services—infrastructure, applications
and connectivity—will need to orchestrate and re-orient completely in order to support their mass adoption.

- IDC expects the annual growth rate of the India domestic IT-ITeS market growth rate to reduce down from an average of 24 per cent recorded during 2003-08 (Growth Phase 1.0) to 14.6 per cent over the next five-years to 2013 (Growth Phase 2.0). This relatively slower growth, albeit on a higher base, will witness enhanced competition leading to a rapidly changing strategy and continuous market realignment on the part of ICT vendors and suppliers.

- It is expected that the combined India domestic IT-ITeS market to grow at 15 per cent in 2012 to achieve revenues of Rs.1,20,666 crore compared to Rs 1,04,906 crore in 2009.

- The domestic IT market is expected to grow at 13 per cent in 2012 to touch Rs. 1,07,655 crore, while the domestic ITeS market is expected to post revenues of Rs. 13,011 crore, a growth of 35 per cent. (ICT, 2010)\(^{42}\)

"In 2010, changes that started earlier have taken a concrete shape. As the economy recovers, both consumers and enterprises would demand services and solutions that allow them to ‘do more with less’. The key business concerns through 2012 will be business model innovation, improved productivity, faster return on investment and cost savings. These business concerns will mean that IT implementations in 2012 and beyond will have to deal with two paradoxical realities – higher business effectiveness and innovation through IT and secondly, greater efficiency of IT investments. Businesses will have to embrace such paradoxes more and more moving forward." (Kapil Dev Singh, 2010)\(^{43}\)
3.14 IT/ITES Destinations in India

The Indian IT-ITES industry is primarily concentrated in seven clusters: Bengaluru, NCR-Delhi, Hyderabad, Chennai, Pune, Mumbai and Kolkata. Below is a breakdown of key statistics of all the major cities in India and various factors which drive IT-ITES in the respective cities.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mumbai</th>
<th>Delhi</th>
<th>Bangalore</th>
<th>Chennai</th>
<th>Hyderabad</th>
<th>Pune</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT/ITES Rank</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Population</td>
<td>16.36</td>
<td>12.79</td>
<td>5.68</td>
<td>6.42</td>
<td>5.75</td>
<td>3.75</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>3.0%</td>
<td>4.2%</td>
<td>3.8%</td>
<td>1.8%</td>
<td>2.8%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Graduates / Yr</td>
<td>31,361</td>
<td>37,870</td>
<td>38,130</td>
<td>34,204</td>
<td>37,288</td>
<td>27,095</td>
</tr>
<tr>
<td>Employees IT/ITES</td>
<td>2,78,869</td>
<td>2,82,708</td>
<td>3,41,374</td>
<td>1,81,528</td>
<td>1,34,894</td>
<td>1,29,056</td>
</tr>
<tr>
<td>Higher Education Institutes</td>
<td>303</td>
<td>315</td>
<td>445</td>
<td>162</td>
<td>79</td>
<td>129</td>
</tr>
<tr>
<td>IT Firms</td>
<td>124</td>
<td>224</td>
<td>185</td>
<td>104</td>
<td>106</td>
<td>58</td>
</tr>
<tr>
<td>ITES Firms</td>
<td>61</td>
<td>145</td>
<td>67</td>
<td>36</td>
<td>44</td>
<td>10</td>
</tr>
<tr>
<td>IT Growth</td>
<td>60%</td>
<td>60%</td>
<td>30%</td>
<td>60%</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>ITES Growth</td>
<td>60%</td>
<td>60%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>40%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Average</td>
<td>Good</td>
<td>Average</td>
<td>Above Average</td>
<td>Good</td>
<td>Average</td>
</tr>
<tr>
<td>Airport</td>
<td>Intl</td>
<td>Intl</td>
<td>Intl</td>
<td>Intl</td>
<td>Intl</td>
<td>Dom</td>
</tr>
<tr>
<td>IT Attrition</td>
<td>25%</td>
<td>30%</td>
<td>30%</td>
<td>20%</td>
<td>30%</td>
<td>22%</td>
</tr>
<tr>
<td>ITES Attrition</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>42%</td>
<td>30%</td>
</tr>
<tr>
<td>Office Space IT</td>
<td>33.80</td>
<td>15.99</td>
<td>50.35</td>
<td>45.76</td>
<td>14.43</td>
<td>23.27</td>
</tr>
<tr>
<td>Office Space ITES</td>
<td>13.52</td>
<td>11.99</td>
<td>40.28</td>
<td>36.61</td>
<td>11.54</td>
<td>17.45</td>
</tr>
</tbody>
</table>

Source: Trammell Crow Meghraj Launches - 'MAJOR IT-ITES HUBS IN INDIA A SNAPSHOT'
3.15 The financial performance and Work force of leading Indian IT/ITeS Firms (by revenue 2007-08)

The following firms were listed as top 10 companies on the basis of their revenue by NASSCOM:

✓ Tata consultancy services
✓ Infosys Technologies Ltd.
✓ Wipro Technologies Ltd.
✓ Mahindra Satyam Computer Services Ltd.
✓ HCL Technologies Ltd
✓ Tech Mahindra Ltd.
✓ Patni Computer Systems Ltd.
✓ Oracle Financial (I flex Solutions) Ltd.
✓ Mphasis, an EDS company
✓ Larsen & Toubro Infotech Ltd.

For the year 2008 – 09, the revenue of TCS has increased to US$ 5.79 billion from US$ 3.79 billion of 2007 – 08. The operating profit is around 25% of revenues. It has a Workforce of over 126,150 professionals by 2008-09, with growth of 17 per cent over 2007-08 employee base of 107,698.

Infosys Technologies Ltd. is showing revenues of US$ 4.40 billion in 2008-09 recording a 13 per cent growth over revenues of US$ 3.88 billion in 2007-08 and the profitability (operating margin) for the year (2008-09) was at 34 per cent of revenues. The workforce is over 104,900 professionals by 2008-09, with growth of 15 per cent over 2007-08 employee base of 91,187.

Wipro has earned US$ 5.58 billion in 2008-09 recording a 12 per cent growth over revenues of US$ 4.96 billion in 2007-08. Profitability (operating margins) for the year (2008-09) was at 18 per cent of revenues. The Workforce of the concern is over 97,810 professionals by 2008-09, with growth of 19 per cent over 2007-08 employee base of 82,122. (Annual Reports of Respective companies)\(^{44}\)
Knowledge Professionals employed in the Indian IT-BPO Sector

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Exp. &amp;</td>
<td>170000</td>
<td>205000</td>
<td>296000</td>
<td>390000</td>
<td>513000</td>
<td>690000</td>
<td>860000</td>
<td>946809</td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BPO</td>
<td>106000</td>
<td>180000</td>
<td>216000</td>
<td>316000</td>
<td>415000</td>
<td>553000</td>
<td>700000</td>
<td>789806</td>
</tr>
<tr>
<td>Exports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic</td>
<td>246250</td>
<td>285000</td>
<td>318000</td>
<td>352000</td>
<td>365000</td>
<td>378000</td>
<td>450000</td>
<td>500000</td>
</tr>
<tr>
<td>Market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>522250</td>
<td>670000</td>
<td>830000</td>
<td>1058000</td>
<td>1293000</td>
<td>1621000</td>
<td>2010000</td>
<td>2236614</td>
</tr>
</tbody>
</table>

*Figures do not include employees in the hardware sector

3.16 Future IT-ITES Manpower Requirements

Current HR trends within the IT-ITES industry point to the following scenario in the future:

- the Indian industry will require 850,000 IT professionals and 1.4 ITES-BPO professionals by 2012
- the Indian IT industry has taken adequate steps to develop talent, particularly among college students
- assuming that current trends in graduate turnout and employment are maintained, the demand for IT software and services professionals will be met
- the BPO industry is unlikely to face talent shortages in the short term
- Current accessibility to talent is very high (at around 80-90 percent of total graduates), but only 10-15 percent of these students have the skills for direct employment without prior training.
- only about 50 percent of this suitable pool is willing to join the industry
- ITES-BPO sector, at the current page, is likely to experience a shortfall of around 500,000 employees. *(NASSCOM, 2009)*

With the projected growth in the IT/ITES industry, a shortfall of 500,000 personnel is expected by the year 2012 *(Nasscom 2007)*. Indian firms usually have been higher up on the service maturity curve in this sector and it should
be ensured that they maintain this lead in the short to medium term in order to compete effectively.

3.17 IT/ITeS – Workforce Challenges

Despite the high growth in IT outsourcing, client firms have faced a considerable amount of dissatisfaction with their providers in recent years. This is not only related to off-shoring to India but outsourcing in general. (Sriram Narayanan Jayashankar M. Swaminathan, 2007)\(^{46}\) For example, a practitioner survey reported that the overall satisfaction index of outsourcers fell to 6.4 on a scale of 10 in 2004, as compared to 7.1 in 2003 (McDougall 2004)\(^{47}\). Another study found that only 62% of the respondents were satisfied with their outsourcing partners in 2004 as compared to 79% a year ago in 2003 (McEachern 2005)\(^{48}\). In particular, offshored projects were cited as difficult to manage because of the complexity in managing the relationship, and problems of cultural adjustment between teams working in different countries (McDougall 2004)\(^{49}\). Another study found that 51% of the clients wanted to terminate their outsourcing contracts due to lack of satisfaction with outsourced software projects, citing poor quality, reduced operational effectiveness and greater management complexity as the primary reasons (McEachern 2005)\(^{50}\).

These studies also indicate that the problems lie with both the service provider and clients alike.

Many Indian vendors – particularly the top ones such as TCS (employee strength of 94702 and utilization of 10 76%) (TCS 2007), Infosys (employee strength of 75000 and utilization of 70.5%) (Infosys 2007), Satyam (employee strength of 38,386 and a utilization of 76.54%) (Satyam 2007) and HCL Technologies (employee strength of 42000 and utilization of 71.1%) (HCL 2007) carry a good percentage of their staff in bench. This level of bench strength may be critical to ramping up projects at a faster pace. Further, the overall skill levels and the level of training of the bench workforce is an important consideration. Finally, while the effective bench strength may reflect
the ability of the firm. (Sriram Narayanan Jayashankar M. Swaminathan, 2007)\textsuperscript{51}

Most firms in India are today experiencing a considerable amount of turnover (also called attrition). The percentage of turnover typically can vary from 15\% of the team turning over to an extreme possibility of an entire team turning over in a year (Schwartz 2007)\textsuperscript{52}. The attrition rates of the top cities in India are given below,

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mumbai</th>
<th>Delhi</th>
<th>Bangalore</th>
<th>Chennai</th>
<th>Hyderabad</th>
<th>Pune</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Attrition</td>
<td>25%</td>
<td>30%</td>
<td>30%</td>
<td>20%</td>
<td>30%</td>
<td>22%</td>
</tr>
<tr>
<td>ITES Attrition</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>42%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Source: Trammell Crow Meghraj Launches - 'MAJOR IT-ITES HUBS IN INDIA A SNAPSHOT' 2007-2008 The Cyberabad Times

This problem can be tackled with better human resource practices and other strategies that include healthier management of team practices. In terms of human resource practices, firms try to ensure ample career movement and job satisfaction to their employees.

While the overall turnover can be addressed from the human resources perspective, the impact of turnover can also be minimized by certain operational practices. Sriram Narayanan Jayashankar M. Swaminathan, in their research found that larger teams have lesser impact of turnover as compared to smaller teams. One of the key reasons is the larger teams have greater room to enable effective cross training so that problems of work disruption due to turnover can be managed. Firms that are sending work offshore can proactively plan for the quantum of work that will allow consistent cross training practices.
Sriram Narayanan Jayashankar M. Swaminathan suggests that communication has multiple facets. Communication skills include both the ability of engineers to communicate effectively with clients over email, and the ability of the engineers to communicate over conference calls verbally. This can be referred to as communication quality. Further, communication also has a second component that includes the overall frequency of communication. Effective communication is a mix of both of these components.

In the field of IT/ITeS, the quality of services of Indian vendors has been an important element of the growth of the Industry. By December 2005, over 400 Indian companies had acquired quality certifications with 82 companies certified at SEI-CMM Level 52” (Nasscom 2006). (Software Engineering Institute at the Carnegie Mellon University levels) This number is the highest among any country in the world. Several IT/ITeS companies go for dual certifications of ISO 9001 and SEI-CMM.

3.18 TEAM WORK in IT/ITeS

IT/ITeS companies apply their sustained efforts in developing and retaining effectiveness in team work. The reason is, effective team work leads to quality work completed economically within the given time frame, which leads to customer satisfaction at one hand and employees’ job satisfaction on the other hand.

To reduce attrition and to ensure quality in work and economy in operations, currently all the business concerns are going through a major change process. One of the key streams in this change process is team effectiveness. As the IT/ITeS concerns bring together new teams and appoint new team leaders, new challenges are created.
It is found.

Team working leads to

- Quick decision making
- Positive and result focused meetings.
- Improvement in overall performance.
- Motivation of employees.

The survey conducted by BT – Indicus – People Strong 2010 among the work teams of IT/ITeS, to list the ten best companies to work for in India reports.42

3.19.1 INFOSYS TECHNOLOGIES LIMITED

- Infosys Technologies was selected as the best employer to work for in 2001, 2002, 2005 and 2006. Infosys and its subsidiaries have 105,453 employees as on September 30, 2009.

- Infosys, which hired 18,000 people in 2009-10, scores 100 on all parameters. Infosys is one of the most sought after companies in campuses. The rate of attrition at Infosys is 11.6 per cent, according to Business Today.

- The qualities the company looks for include analytical ability, teamwork and leadership potential, communication and innovation skills with a practical and structured approach to problem solving. They also place importance on professional competence and academic excellence.

- The compensation and reward system is aligned with individual, team and company performance while reinforcing high performance work ethic. Infosys has consciously created a networked, non-hierarchical organisation with a professional, result-driven work ethic, thereby encouraging and empowering every member of a project team to contribute to the team effort. (Hema Ravichandar, 2010)54
3.19.2 GOOGLE INDIA

Google India, which boasts of giving freedom to its employees, has been chosen as the second best employer in India. Google employees believe that 'work is fun'. On a worldwide basis, Google employed 19,835 full-time employees as of December 31, 2009, up from 19,665 full-time employees as of September 30, 2009. In India, Google has 2000 employees. The rate of attrition is less than 5 per cent. The company scores the highest on job content and financial compensation.

Though Google has grown a lot since it opened in 1998, it still maintains a small company feel. At lunchtime, almost everyone eats in the office café, sitting at whatever table has an opening and enjoying conversations with Googlers from different teams. The commitment to innovation depends on everyone being comfortable sharing ideas and opinions. Every employee is a hands-on contributor, and everyone wears several hats. Because the company believes that each Googler is an equally important part of success.

Googlers thrive in small, focused teams and high-energy environments, believe in the ability of technology to change the world, and are as passionate about their lives as they are about their work.

At Google, the management is committed to a supportive work environment, where employees have the opportunity to reach their fullest potential. (GOOGLE.COM, 2010)\textsuperscript{55}

3.19.3 TATA CONSULTANCY SERVICES (TCS):

India's largest employer TCS is ranked 3rd in the survey of best employers. TCS has over 143,000 IT professionals in 42 countries. The company scores high on job content and financial compensation. According to the survey, TCS is also the most preferred company among IT professionals. TCS hired 8,000 people in 2009-10 and the rate of attrition is 11.4 per cent.
LEARNING AND DEVELOPMENT PROGRAMME

Multiple channels including online and classroom learning, job rotations and competency certifications offer Team TCS to remain on a high learning curve throughout their career. Soft skills or ‘people skills’ have emerged as a key parameter of individual learning and development. Cross-cultural communication and diversity management are key organizational and individual competencies at TCS that help create a sensitive and inclusive work environment. This allows highly dispersed cross-cultural teams to collaborate and work as a cohesive unit. Soft skill is considered as a key leadership trait where one requires strong team building and people management skills. The company integrated soft skill development into all leadership development programmes with emphasis on managing cross-cultural teams.

LEADERSHIP DEVELOPMENT/SUCCESSION PLANNING

This includes holistic learning and development across technologies, domains, communication and life skills to help TCSers assume more strategic roles in the organizations globally, meet customer expectations, understand cultural nuances of a country and effectively handle the challenges of leading a diverse talent pool in the organization, and become mentors and role models for the team members.

(Ajoy Mukherjee, VP & Head, Global HR, TCS shares how TCS has spearheaded the journey of India’s reputation as an IT superpower.)

3.19.4 IBM

IT seems to be the hot choice for employees with IBM in the top league. IBM offers freedom and flexibility. According to a survey, IBM scores high on job content and financial compensation. The company also has the highest retention rates. IBM re-entered the Indian market through a joint venture in 1992. It has 398,455 employees worldwide. IBM India employs 74,000 professionals.
IBM has retained its position as one of the World’s Top Employers of Choice over these years because of its three-fold initiatives for the employees:

- **Capability:** Rigorous and ongoing career/skills development programs
- **Climate:** A challenging, empowering work environment, with world-class infrastructure
- **Culture:** Sensitive to a global workforce

The attributes that qualify these 3Cs are the Top Reasons that people come to work at IBM.

**CAPABILITY – Molding Global Leaders and Fostering Employee Talent**

To be a leading international company, it is important to develop an organization of global leaders and dynamic international employees. IBM is committed to the employee well-being and **career growth**. One of IBM’s key strategies and policies is to attract, motivate and retain the best talent in our industry, and develop them into global leaders. The company makes sure talented employees are recognized for their achievements and encourages them to seek fresh challenges and learn new skills through training and mentoring **programs**. Besides offering a myriad of technology avenues for employees to work on and innovate on newer ones, IBM offers employees several programs for employee development, to help IBMers become more effective in their jobs. IBM’s investments in training prepare employees with the skills they need now and in the future.

**CLIMATE: Flexibility@Work and Employee Wellness Programs**

IBM believes in empowering employees as partners to success, offering a **global work culture and best workplace amenities**. At IBM, cubicles are out and mobile offices are in! Workforce flexibility is a competitive advantage for IBM. It helps Employer of Choice for new hires, and enables the company to retain top talent. IBM has a wide array of HR policies and programs to creating a more **flexible work environment** so that individuals produce results with as
much autonomy as possible. Some of IBM’s workplace flexibility programs include individualized daily work schedule, Flexible (or Compressed) Work Week, Regular Part-Time, Leave of Absence, and Remote/Mobile Work Options.

**CULTURE: Workforce Diversity**

Diversity in IBM means welcoming all people to the workplace regardless of factors unrelated to job performance. The mission of IBM’s Global Workforce Diversity is to lead in creating a business environment. IBM’s definition of diversity includes all human characteristics that make one unique as individuals. It includes everyone and excludes no one. Race, gender, geographic origin, culture, lifestyle, age, disability, economic status, marital status, and religion are just some of the characteristics that define people. IBM works hard to build a culture of inclusion and committed in providing an equal workplace to individuals who are differently-able and need special care. *(IBM.COM, 2010)*

3.19.5 MICROSOFT INDIA

Microsoft India, which was at the top of the employee charts in 2007 and 2008, has been pushed to the fifth position. Microsoft has over 5,000 employees in India. It scores high on job content and financial compensation.

**LEADERSHIP DEVELOPMENT:** The Company spots and develops youngsters into leadership roles early in their careers and spends a large amount of time and money preparing them for the job ahead.

**INTERNAL TRANSFERS:** Microsoft India employees can seamlessly transfer among the six business groups if they feel that they are stagnating in their current job.

**TRANSPARENT COMPENSATION:** The system of pay and appraisals are open and transparent inside the company, and employees know what they have to do to get to the next grade.
MENTORING: The mentoring system inside the company is one of the best. Mentors and their wards meet regularly and have an open and frank dialogue. And this relationship is not just a one-way street, Mentors often learn from their wards as well.

RECRUITMENT: New employees are given a ‘Buddy’ to help them assimilate into the company. The company also helps in finding employees accommodation by having a real estate consultant. (*BT-MERCER-TNS STUDY, 2007*)

3.19.6 WIPRO TECHNOLOGIES LIMITED
IT giant Wipro is 6th among India’s top employers. The company has 102,746 employees as of December 31, 2009. According to the survey, Wipro is considered as a secure and flexible company.

- Wipro Technologies Limited considers feedback and communication as the important requirement for team effectiveness. Wipro as an organization believes in Connecting and Listening to people. *Channel W the employee portal* has been creating a de facto ‘Wipro community’ by allowing Wiproites to interact, disseminate information on things they most cherish. The intranet ensures that the entire organization is wired and there is meaningful exchange of information/views across domains and geographies. Key sections encourage employee participation and communication through bulletin boards and chat rooms among other things. Employee feedback and continuous improvement is a cornerstone of progress. Wipro believes that the most worthwhile inputs for betterment of people practices come from employees themselves, as they are the customers. Wipro has various processes in place, which ensure that employee feedback reaches senior management.
- W10 is a dipstick survey with 10 questions which checks the satisfaction level on issues, which affect the health of the workplace and supervisory effectiveness. The feedback given by employees is shared with management through scorecards.

- **EMPLOYEE PERCEPTION SURVEY:** Wipro conducts **employee satisfaction surveys** every two years. Employees are encouraged to give comments and rank the organization on certain areas/satisfaction drivers. Top management then prepares a timely action plan to address the areas of concern and task forces are created to focus on improvement areas and implement action.

- **ACTION PLAN (MEET YOUR PEOPLE PROGRAM) -** The W10 scores provide the trigger to managers/supervisors to meet their teams and resolve issues which create dissatisfaction in the workplace.

- **NEW MANAGERS ASSIMILATION PROGRAM (NMA):** Since teamwork is highly valued, assimilation of a **new manager in team play is a very critical part** of his/her induction to the company. It **enhances team bonding** and aims at consensus and collation of concerns, the challenges ahead, "must-know-about-manager" etc. from the team. (2010 Wipro Limited)\(^5\)

### 3.19.7 STATE BANK OF INDIA

Breaking the monopoly of IT companies in the list of the best employers is public sector bank, SBI. India's largest PSU bank, SBI is the 7th best employer in India. SBI, the largest recruiter after IT firm TCS has over two lakh employees. About 28 per cent of the employees surveyed were above 33 years and 48 per cent were above 28 years.

The country’s largest lender, State Bank of India (SBI), has launched a new programme, Citizen SBI, aimed at **attitudinal change and transformation of its employees** through a series of human resources activities. "Citizen SBI project seeks to bring behavioral transformation by seeking more active role from the employees." (BS Reporter, 2009)\(^5\)
3.19.8 BHARTI AIRTÉL

Along with the steady progress in its business, Bharti Airtel has won the hearts of the employees as well. It is ranked 8th among the best employers. The company has 18,201 employees. The rate of attrition is 10.5 to 11 per cent. It scores high on **career and personal growth and company reputation**. The company believes that people are its biggest assets.

3.19.9 HP

HP India was established in 1988. Ranked 9th among the top 10 employers in India, HP has about 321,000 employees worldwide and 31,000 employees in India. It scores high on **job content and financial compensation**. One of the best aspects about HP India is that it allows employees to **move across jobs internally**, says the survey.

**Get Rewarded, Get Recognised:**

HP recognises the fire in employees and believes that extraordinary efforts deserve their rewards. That's why HP has special **Rewards & Recognition Programmes, including Cash Awards** to recognise exceptional contributors. (HP.COM, 2010)

3.19.10 HDFC

HDFC Bank has been chosen as the tenth best company to work for in India. The company has over 47,000 employees. The bank hired 4,500 employees as of December 2009 and its attrition rate is 15 per cent. Employees find the company **transparent and friendly**. It scores high on **job content and company reputation**.

The industry profile of the IT and ITeS sectors under service industry explains Human Resources Development measures being taken by various top IT/ITeS companies, which includes team building, creating and retaining effectiveness in teams. This study proposes to analyze the Impact of Team Characteristics on Team Members and on Team Effectiveness With reference to IT and ITeS employees in the City of Chennai.


22. Ken Blanchard 2005, From Wikipedia, the free encyclopedia "Go Team! Take your team to the Next Level." Berret-Koehler publishing Inc. San Francisco, CA. 2005


25. Kay Dora Abd Ghani 2009 (Corresponding author) Faculty of Civil Engineering, Universiti Teknologi MARA 02600 Arau, Perlis, Malaysia et al, ‘Organizational Contexts, Team Designs and Process Variables as Factors Influencing Team Effectiveness’ *Asian Social Science Journal, November 2009*


33, 36. *IBEF. 2009 ‘Information Technology – Key Opportunities, September, 2009,*

34. 42. ICT market intelligence firm IDC India 2010. ‘The year-end India Domestic ICT Market Top 10 Predictions 2010 report


37. *IT: Industry profile, July 2009, CRIS INFAC*

38. *IT: Industry profile, July 2009, CRIS INFAC*


41."IT industry may create 40k jobs this fiscal: Nasscom", *Economic Times website*, www.economictimes.indiatimes.com, accessed 20 September 2009

43. Mr. Kapil Dev Singh, Country Manager, IDC India, 2010
44. Annual reports of respective companies


57. BT-MERCER-TNS STUDY/ The best companies to work for in India/ October 26, 2007 / http://businesstoday.intoday.in


59. BS Reporter / Mumbai September 2, 2009