

HR Focus Within The Indian Information Technology Industry

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INTRODUCTION

Information Technology (IT) is generally viewed as those forms of technology that are primarily used in the creation, storage, exchange, and usage of information in varied forms (business data, voice conversations, still images, motion pictures, multimedia presentations, etc.). It is the technology that is driving what has often been called "*the information revolution*". Information is a stimulus that has meaning in some context for its receiver. When information is entered and stored in a computer, it is generally referred to as data. After processing, i.e. compacting, editing, deleting, merging, etc., the output data can again be perceived as information. When information is packaged or utilized for understanding, it is known as knowledge.

INFORMATION TECHNOLOGY INDUSTRY - THE INDIAN PERSPECTIVE

In India, the software boom started somewhere in the late 1990s. Most of the Indian software companies at that moment offered only limited software services such as banking and the engineering software. The business software boom started with the emergence of the Y2K problem, when a large number of skilled personnel were required to fulfill the mammoth database-correction demand in order to cope up with the advent of the new millennium. When the first generation of computers were made, their memory was extremely small. To save on space, the four-digit Gregorian year was abbreviated to the last two digits. This was all right in the twentieth century. With the advent of the year 2000, representation of the year in two digits would have caused failures in arithmetic; incorrect softwares would have assumed that the maximum value of a year field was "99" and would roll systems over to "00", which could be mistakenly interpreted as 1900 rather than 2000, resulting in negative date calculations, and thereby causing a worldwide catastrophic information collapse. Indian software professionals got a golden chance to depict their skills in solving the Y2K problem, though it was not very technical, but required a lot of data entry. It fetched us a good fortune in terms of rupees. The problem of Y2K kept on fetching lucrative jobs for Indian software professionals until almost the end of the year 2000. The software industry after the Y2K problem was resolved, and saw many Indians losing their jobs. The condition worsened with the terrorist attack in the US, which resulted in an inevitable mass layoff of the professionals, especially from the south-east Asian countries. About 70,000 Indian software graduates were estimated to be on jobs in the United States in the year 2000, but their number plummeted to 30,000 in 2002 following the terror attacks.

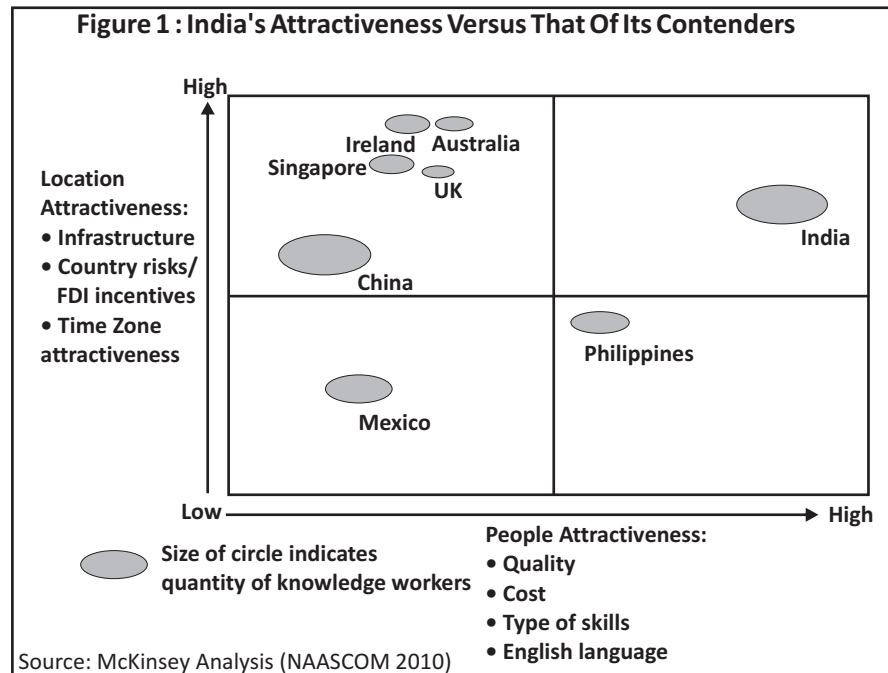
THE INDIAN IT INDUSTRY - CURRENT SCENARIO

Despite all these, the Indian economy has grown at an average rate of 6.0% a year during the last five years. In India, the success of the software industry can be attributed to the excellent teamwork between the Government and the Industry. The Government of India, considering the performance of the Indian software industry, has extended all support, including fiscal benefits, availability of high-speed data communications and infrastructure and has ensured an almost red-tape-free system. The fiscal benefits include trade-free zones, Software Technology Park schemes, zero import duty on softwares, and 100% exemption on profits from software exports. Fortunately, for India, the phenomenon of "*reverse brain drain*" is enriching its workforce, with people having diverse international experience, knowledge of state-of-art technology, management skills and much more. This has made it easier for Multi National Companies (MNCs) to establish their back up offices in India. The major sectors which are witnessing a special thrust for adoption of IT are: Government Administration, Insurance, Banks, Energy, Financial Institutions, Defence, Public Tax System, Ports, Customs, Telecom, Education and Small Office/Home Office / Individuals. Large sectors with slow IT penetration rate, such as the textile industry and healthcare are being encouraged by the

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government and the private sector to adopt IT. In all, the information technology industry is going to be one of the forerunners among all, who'd take India into the elite league of the so-called "*developed*" countries. The Figure 1 depicts the attractiveness of the Indian IT market and thereby, substantiates the growth witnessed so far.



INDIAN IT INDUSTRY - THE HR FOCUS

Growing global demand for appropriately skilled, industry-oriented professionals has highlighted the need to develop India's ICT manpower capabilities. Apt IT and management skills have assumed an ever-greater importance in the current-day environment. ICT manpower development today is not only crucial for sustaining the growth of the Indian economy, but is also important for maintaining the country's edge in the global markets. Currently, only about 25% of technical graduates and 10-15% of general college graduates are suitable for employment in the offshore IT and BPO industries, respectively. As countries from around the world enter the offshore market; it is necessary that India improves the quality and skills of its workforce so that it can sustain its IT growth. In tune with this, NASSCOM has taken up various measures for the development of the IT Workforce. They are:

✿ NASSCOM has initiated IT Workforce Development program, wherein various industry-academia meets and round tables are regularly organized to develop the required skill sets of potential employees in the IT industry, latest being the NASSCOM ITWD workshop that was organized in Dharwad, Karnataka in May 2006.

✿ NASSCOM has also signed MoUs with UGC and AICTE to strengthen professional education in line with the IT industry's requirements of demand for skilled professionals.

✿ NASSCOM has undertaken an initiative to create, operate and maintain a national database of employees working in ITES BPO industry in India, known as the National Skills Registry (NSR) - a centralized database of all employees of the IT services and BPO companies in India. This database contains third party verified personal, qualification and career information of IT professionals. The objective of NSR is to improve recruitment practices in the IT and BPO industry, which will in turn help in maintaining India's global competitive advantage. It is an employee-friendly measure to minimize any misuse of employee identity.

✿ NASSCOM Assessment of Competence (NAC) is a multi-pronged approach to facilitate manpower development for the short and long term. NAC aims to address the possible talent shortage by creating a robust and continuous pipeline of talent through a standard assessment and certification.

✿ NASSCOM's Executive Development Programme (NEDP) and leading quality consultancy in India, QAI have initiated the first-of-its-kind Certification Program for Frontline Management for ITES-BPO sector. This program

received a very positive response from the industry for its "on-the-job" relevance.

METHODOLOGY

The data for this study was basically chosen from the Prowess database, wherein the top 50 companies of the IT industry, based on their Average Market Capitalization were chosen for the purpose of analysis. Of the chosen companies, 25 companies were not considered due to non availability of data. The Directors' report for each company for three consecutive years (2003-04, 2004-05 and 2005-06), were collected and fed into SPSS Text Analysis. Different Codes and Categories were generated. Themes were subsequently generated after giving due consideration to the various codes and categories. The themes were chosen keeping in mind the applicability to most of the organizations in the Industry. Finally, secondary data was relied upon to collect Industry and company-specific information. The study was to analyze the human related aspects in the Information Technology industry. The method followed for this study was Content Analysis.

THEMES

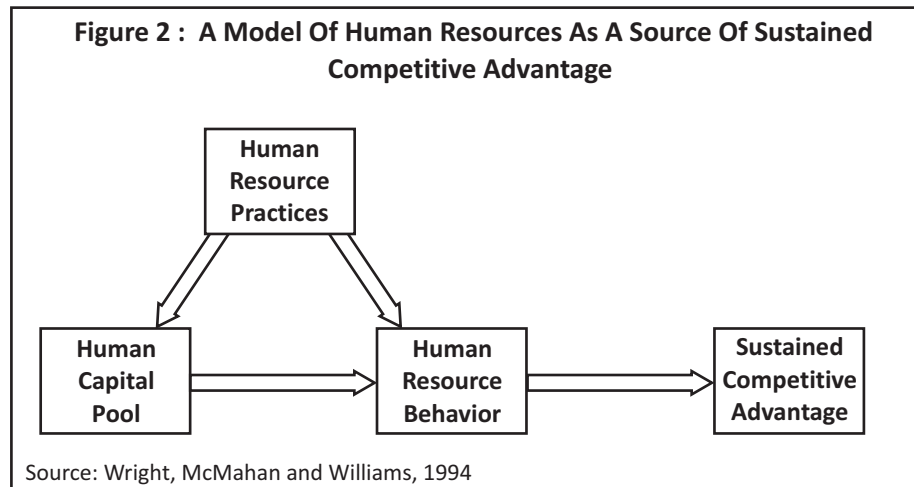
The Themes generated from the codes and categories that were developed are as follows:

❖ **Theme 1 : Partnering with employees for growth.**

❖ **Theme 2 : Leveraging knowledge management to achieve organizational performance.**

❖ **Theme 1 : Partnering With Employees For Growth :** The fact that people indeed are the essential elements which are required and are those which can contribute and sustain the growth of a business finds roots in the literature. According to Lado and Wilson (1994), there are four types of competencies which can be developed in people in order to leverage them as a competitive advantage. They are the managerial, input-based, output-based and transformational. These competencies and the people themselves yield a sustained competitive advantage to a firm and contribute to its growth and excellence. If people are considered from the "resource based view" (Conner, 1991; Wernerfelt, 1984), then they are viewed as organizational resources and these resources can be leveraged to achieve business excellence. This contribution and leverage to the organizational growth, by the people, stems from the fact that the capabilities of people are rare, valuable, non-substitutable, and imperfectly imitable and hence, form the basis for a firm's sustained competitive advantage (e.g., Barney, 1986, 1991). The resource-based view suggests that human-resource systems can contribute to sustained competitive advantage through facilitating the development of competencies that are firm specific, produce complex social relationships, are embedded in a firm's history and culture, and generate tacit organizational knowledge (Reed & DeFillippi, 1990; Wright & McMahan, 1992). The sustained superior performance of the most admired companies, such as Marriott, Borg-Warner, and Merck, has been attributed to unique capabilities for managing human resources to gain competitive advantage (Ulrich & Lake, 1990). But what and how it can be done to make people competencies, a fulcrum of growth needs to be considered. Researchers, drawing largely on a behavioral psychology perspective, have addressed the link between human resource management practices and competitive advantage (e.g., Schuler & Jackson, 1987; Schuler & MacMillan, 1984). From this perspective, researchers have argued that human resource management practices can contribute to competitive advantage, insofar as they elicit and reinforce the set of role behaviors that result in lowering costs, enhancing product differentiation, or both (Schuler & Jackson, 1987). According to Pfeffer (1995), for any organization to achieve success on the competitive front, it first needs to start working with people, not by replacing them or limiting the scope of their activities. It entails seeing the workforce as a source of strategic advantage, not just as a cost to be minimized or avoided. When people are made as a competitive advantage for a firm, then such firms can be distinguished from their competitors in terms of the positive economic benefits they bring about and their lack of duplication. Firms that take this different perspective are often able to successfully outmaneuver and outperform their rivals. Now, if we need to talk of resources from the resource-based viewpoint, then according to Wernerfelt, a resource is '*anything, which could be thought of as a strength or weakness of a given firm . . . whose tangible assets which are tied semi permanently to the firm.*' Barney expands this definition to include '*all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.*' According to Barney, resources fall into three categories: physical capital resources, human capital resources and organizational capital resources.

Physical capital resources consist of such things as the firm's plant and equipment, technology and geographic location. Human capital resources include such things as the experience, judgement and intelligence of the individual managers and workers in the firm. Organizational capital resources consist of such things as the firm's structure, planning, controlling and co-coordinating systems, and the informal relations among groups within the firm and other firms in its environment. What we are concerned with is the, Human Capital resources, which can be developed and groomed so as to sustain them as the firm's competitive advantage.



Theme 2 : Leveraging Knowledge Management To Achieve Organizational Performance : There is no doubt that knowledge management is now a very dominant theme in modern enterprises. To survive and compete in a knowledge-based economy, companies must learn to manage and sustain their intellectual assets. As a number of practitioners have noted, human resources play an important role in the transition process to the knowledge-based economy. This transition is especially important for IT companies for which knowledge and knowledge management is essential for survival. This transition process is characterized by participant-driven integrative teamwork for dealing with various tasks and issues in organizations. Knowledge Management can be essentially brought about by the development and alignment of certain human resources practices with knowledge creation and enhancement. Once we align HRM practices with the distinctive characteristics of knowledge work, we need to encapsulate knowledge, action and performance. Knowledge-based theory of the firm views *"the firm as a dynamic, evolving, quasi-autonomous system of knowledge production and utilization."* (Spender, 1996, p. 59). It builds on organizational learning theory and the resource-based view of the firm (Wernerfelt, 1984; Conner, 1991), which conceptualizes a firm as a bundle of resources that form the basis for the firm's competitive position (Dierickx & Cool, 1989). Knowledge-based theory considers knowledge as a distinctively unique resource (Kogut & Zander, 1992) and views the ability to use, share, and create knowledge as a source of sustained competitive advantage (Kogut & Zander, 1992). Indeed, this theory suggests that the primary reason for the existence of a firm is its superior ability to integrate multiple knowledge streams, for applying prior knowledge to tasks as well as for creating new knowledge (Conner, 1991). According to the theory of knowledge creation (Nonaka, 1994; Nonaka & Konno, 1998), an organization cannot create knowledge by itself; instead, individual knowledge is the basis of organizational knowledge creation. This theory emphasizes knowledge creation through a dialectical process, with contradictions synthesized through interactions (Nonaka & Toyama, 2003). It is generally agreed in contemporary organization and management studies that knowledge is a powerful resource for organizational growth and that knowledge workers are scarce assets who need to be nurtured.

CASE STUDY: I

Samsung Semiconductors Limited (SEC) is a manufacturer of various semiconductors, located in the southern suburb of Seoul. Samsung has emerged as the world's largest memory chip maker, and is the seventh largest semiconductor maker (Kim, 1997). SEC is basically a bureaucratic organization and had 4830 employees in 1998. Following the

reforms undertaken by its parent company, it had to reform its own HR practices to make an efficient use of its Human resources. These '*management reform*' schemes were '*sensitive*' issues, as there was obviously a cultural reluctance to follow the management reform that was aimed at laying off workers and staff within SEC. Therefore, there was little initiative and motivation amongst workers and staff within SEC. In addition, it faced an ever-competing situation from overseas competitors. Dealing with these difficulties, a new way of thinking (called '*holistic and emotional*' ways of thinking) was evolved. Like other Korean companies, it had strong regional differences and a severe generation gap between the older and the younger workers. Indeed, the corporate culture was divided into smaller subcultures amongst the various working groups within SEC. In this situation, conflicts were mainly due to different subcultures amongst working groups and teams, thus, good communication was required to build a proper relationship amongst various working groups and teams within the SEC. To further enhance its performance, Samsung incorporated the following principles into its HR Policy (see Figure 3).

Figure 3 : Samsung's New HRM Policy	
SAMSUNG'S NEW HRM POLICY	
Basic Policy Direction	1. Respect for individual character and competence. 2. Tradition of mutual trust. 3. Systems of fairness. 4. Comfortable work environment and generous benefits programmes. 5. Industrial relations based on mutual trust and common goals.
HRM in practice	1. Fair treatment of employees. 2. Continuous professional development. 3. Encouraging creativity and facing challenges. 4. Diverse channels for open communication. 5. Labour-management consultation. 6. Fair management without discrimination.
Source: (Lim & Pucik, 2002)	

Like many other companies, Samsung Electronics also came to realize that the implementation of knowledge management and the learning organization became the most important issues in dealing with constraints and difficulties that came about from the changing business environment. In putting knowledge management into practice, there have been dramatic changes in Samsung Electronics, for instance, the managers appreciated that employees were being recognized as '*intellectual assets*' as they possessed knowledge and know-how. Employees were being seen as having the value of different perceptions and possessed the ability to create and develop knowledge, and that knowledge could continually and collectively be formed and reformed to foster organizational learning. To develop the potential of people as '*human resources*', the idea of '*systems thinking*' was collectively evolved from the local contexts, and it became vital to develop human resources in the context of organizational learning. So, in order to survive in the new competitive environment facing the company, knowledge and experience were created and shared amongst participants, tacit forms of knowledge could be exposed and exercised. A new condition for organizational development was created to motivate members of the staff that could act as the agents of change within SEC. This had resulted in an emergence of a new culture with '*systems thinking*' that was absolutely needed to develop the problem-solving ability of participants who wanted to sustain their purposeful activities within SEC.

CASE STUDY : II

Eltra, which is a non-profit organization of the more unusual kind, unlike most non-profit organizations, it does not have an ethical or cultural goal, but exists exclusively for the use of the general public. Eltra was founded as an independent company on January 1st, 1998, due to changes in The Danish Electricity Supply Act. The company employs 224 people and had a turnover of DKK 6.02bn (approximately US\$904m) in 2001. Eltra is financed through appropriations and has to be economically neutral. Being a responsible transmission system operator, Eltra is in contact with every part of the electricity system. The company must cooperate with the local and regional grid

companies and the responsible transmission system operators in the neighboring grid companies. In fact, Eltra must undertake these responsibilities while still providing a safe electricity supply and at the same time, considering the socio-economic aspects, the environment and the needs of the market. In view of the changing external environments, the company wanted to change its identity from a public provider to knowledge-based identity. The company wanted to introduce the so-called 'soft values' into their system, because the changing demands from the surroundings called for a new way of thinking. An organizational change took place in Eltra in May 2000 in order to prepare the organization for the obligations arising from the deregulation of the electricity market. This called for a change in the work procedures and relations between departments. Traditionally, the company worked within sections and not across sections. So, the deregulation of its sector demanded the adoption of cross sectional work environment and a sharing of resources and knowledge. Thus, knowledge management was born within the company (Kjaergaard , 2003).

CONCLUSION

With people acknowledged as key resources of organizations, Barney (1991) has rightly stated that these people resources are rare, valuable, non-substitutable, and imperfectly imitable. Relying on this viewpoint, this study is significant and adds immense value to the existing body of HR literature, owing to its uniqueness. It primarily aims at tapping the sincerity of the organizations for its human resources and their wellbeing. The content analysis undertaken for the directors' reports for the IT companies indicate that the industry is definitely forging ahead with its people's policies. It has embarked on a mission of involving its employees' at every stage and in every step of it, towards growth. Such a focus towards employees' will undoubtedly contribute to its future success and will put India ahead of the rest of the world in terms of people orientation.

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