

**INNOVATIVE HUMAN RESOURCE PRACTICES
AND
SELECTED HR OUTCOMES
IN
SOFTWARE FIRMS IN KERALA**

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by

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Certificate

This is to certify that the thesis entitled “**Innovative Human Resource Practices and Selected HR Outcomes in Software Firms in Kerala**” is a record of bonafide research work done by Mr. Binoy Joseph part-time research scholar, under my supervision and guidance.

The thesis is the outcome of his original work and has not formed the basis for the award of any degree, diploma, associateship, fellowship or any other similar title and is worth submitting for the award of the degree of Doctor of Philosophy under the Faculty of Social Sciences of Cochin University of Science and Technology.

Prof. (Dr.) Sebastian Rupert Mampilly
(Research Guide)

Declaration

I hereby declare that this thesis entitled “**Innovative Human Resource Practices and Selected HR Outcomes in Software Firms in Kerala**” is a record of the bona-fide research work done by me and that it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or any other title of recognition.

Binoy Joseph

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ABBREVIATIONS

BFSI	:	Banking, Financial Services and Insurance
CEO	:	Chief Executive Officer
CMM	:	Capability Maturity Model
CMMI	:	Capability Maturity Model Integration
FY	:	Financial Year
HIWS	:	High Involvement Work Systems
HPWS	:	High Performance Work Practices
HRIS	:	Human Resources Information System
HRM	:	Human Resource Management
HRMI	:	Human Resource Management Innovation
ICT	:	Information and Communication Technology
IHRP	:	Innovative Human Resource Practices
IP	:	Internet Protocol
IT	:	Information Technology
ITES	:	Information Technology Enabled Services
KPA	:	Key Process Areas
M&A	:	Mergers and Acquisitions
MNC	:	Multi-National Corporations
NASSCOM	:	National Association of Software and Services Companies
PCMM	:	People Capability Maturity Model
PIM	:	Performance Information System
POS	:	Perceived Organisational Support
R&D	:	Research and Development
SEI	:	Software Engineering Institute
SEM	:	Structural Equation Modeling
USD	:	United States Dollar

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Chapter 1

INTRODUCTION

C o n t e n t s	1.1	Indian Software Industry
	1.2	Importance of People Management in Software Companies
	1.3	Implications for Strategy
	1.4	Importance of HR in Software Industry
	1.5	Infrastructure
	1.6	Competitiveness Review
	1.7	Human Resource Issues in the Time of the Global Economic Slowdown
	1.8	Organisation of the Report

This chapter presents a short review of the Indian software industry, its analysis and its performance. It further describes software products and the need for developing talent for software products. This chapter also intends to shed light on the importance of people management in software companies and its implications for human resource strategy for opening up to the reader what is in store in the rest of the thesis.

Human resource management (HRM) is the strategic and coherent approach to the management of an organization's most valued assets - the people working in the organization, who individually and collectively contribute to the achievement of the objectives of the business. An HR manager's role entails taking key decisions on Workforce planning, Recruitment, Induction and Orientation, Skills management, Training and Development, Personnel Administration, Compensation in wage or salary, Time Management, Payroll, Employee Benefits Administration, Personnel Cost Planning and Performance Appraisal. Organizations must provide the right number of competent staff to meet clients' needs.

Human Resources function is presently undergoing a sea change. It has languished as an unappreciated, often disconnected staff function in organizations for decades. With the marketplace becoming intensely competitive on account of global impacts and trends, top management is searching in all directions for opportunities to make the enterprise more effective and profitable. Human Resources have also come under their spotlight. In some cases the scrutiny has been principally to identify how to cut the size of the budget and staff. In other cases the goal was to learn how this traditional expense centre can be turned into a value adding operation.

In a recent survey of Indian CEOs, it was suggested that Indian managerial leaders were less dependent on their personal charisma; rather, they emphasize logical and step-by-step implementation processes. Indian leaders focus on empowerment and accountability in cases of critical turnaround challenges, innovative challenges, innovative technology, product planning and marketing, or when other similar challenges are encountered (Spencer, Rajah, Narayan, and Mohan & Latiri, 2007).

One of the noteworthy features of the Indian workplace is its demographic uniqueness. It is likely that India will have 986 million people of working age in 2030, which will probably be about 300 million or more than in 2010. When India embraced liberalization and then economic reforms in the early 1990s, dramatic changes were set in motion in terms of corporate mindsets and HRM practices as a result of global imperatives and accompanying changes in societal priorities. Indeed, the onset of a burgeoning competitive service sector compelled a demographic shift in worker educational status and heightened the demand for job relevant skills as well as regional diversity. Expectedly, there has been a marked shift towards valuing human resources (HR) in Indian organizations as they become increasingly strategy driven as opposed to the culture of the status quo. Accordingly, to gain competitive advantage in industries like software services, pharmaceuticals, and biotechnology (where India is seeking to assert global dominance), the significance of HR is emphasized.

Recent developments in the US financial markets have had a direct impact on other sectors and on countries across the world. Economies like India are slightly more insulated than others owing to the tight regulatory environments; however, the globally integrated export industries in the IT and BPO sectors have had some impact especially for the Indian Information Technology Business Process Outsourcing (IT-BPO) sector. It began to re-engineer itself to face the challenges presented by a macro-economic environment which was witnessing substantial volatility in commodity prices, inflation, and decline in GDP rates, cross-currency movement, finally culminating in the economic downturn. While the current mood is that of 'cautious optimism' the industry is expected to witness sustainable growth over a two-year horizon, going past its USD 60 billion export target in

financial year (FY) 2011. While on the one hand, the industry has significant headroom for growth and on the other hand competition is increasing with a number of countries creating enabling business environments aimed at replicating India's success in the IT-BPO industry. Notwithstanding this, India is expected to register growth, even though it maybe at a slightly lower rate compared with earlier years. (www.nasscom.org).

The Indian IT-BPO industry clients are now seeking more than just cost savings. They are looking at the country's service providers as transformation partners, innovating and developing customized solutions to address their needs. As a result, Indian companies are now trying to adopt a culture that encourages innovation, embraces new trends such as Green IT, and delivers solutions that are focused on re-engineering and transformation. Proactive capability building through focused investments across domains, processes, and technology expertise, coupled with added flexibility and scalability, delivers on this enhanced value proposition. The silver lining of the economic downturn is the opportunity for the industry to enhance its overall efficiency. Companies are increasingly looking inwards and focusing on process benchmarking, enhanced utilization of infrastructure and talent, increasing productivity and greater customer engagement. Coupled with wage moderation and lower attrition, these measures will help industry sustain its margins and invest in future growth (NASSCOM Newslines, November 2008).

1.1 Indian Software Industry

The year 2007 was characterized by economic revival, corporate profit predictability, growth in IT and related sectors and growth initiatives for revenue enhancement. An increase has been registered in IT/ ITES spending

chiefly due to requirements for better customer service, tracking employee performance, enhancing employee productivity, product development and innovation, increasing the responsiveness of IT organization and efficiency improvement.

Outsourcing has been the key driver of growth in IT and other business services. Apart from this, globalization and competitiveness has led to growth in other related sectors such as customer interaction, human resources and finance.

The software service industry generated revenue of approximately US \$ 50 billion in the fiscal year that ended up in March 2010. In addition, the IT hardware segment generated revenue of approximately US \$ 10 billion in the same period, making a grand total of US \$ 60 billion contributed by the Indian IT industry to India's GDP. That is approximately 6% of India's GDP, generated by approximately 2.5 million professionals that currently make up this stellar industry. If this may be considered as phenomenal performance so far, the prospects for the next decade are truly mind boggling indeed. It is now believed that the software industry center research US \$ 175 billion in revenue by 2020. Focused initiatives and innovation led growth continued to lead to additional revenue and be upto US \$185 billion, including domestic software sales- a grand total of US \$360 billion.

IT - ITES activity is also being positively influenced by consolidation in key customer verticals like mergers and acquisitions in areas like healthcare, insurance, banking, media and communications. Post-merger integration programmes have resulted in re- engineering of business processes and consolidation of IT infrastructures continue to supplement demand. (NASSCOM Strategic Review year, 2009).

1.2 Importance of People Management in Software Companies

It's no secret that business success today revolves largely around people, not capital. This is of great significance especially in 'people businesses' like Information Technology (IT) companies with relatively high people costs and low capital costs. According to Barber & Strack, (2005) people businesses are those companies with relatively high employee costs, a high ratio of employee costs to capital costs, and limited spending on activities, such as R&D aimed at generating future revenue. The question of where and how value is being created or squandered could be identified in people-intensive businesses by looking into metrics of productivity of people rather than of capital.

The critical resources are employees an IT company hires, motivates and retains. While occasionally, the value employees create in some IT Companies does take the form of intangible assets like intellectual property, brands, and the like, most employees in people businesses like IT services and products concentrate more on creating short-term value directly for customers, month for month and year for year, without the intermediary step of creating an intangible asset.

The distinct but generally unappreciated economics of people-intensive businesses like IT call not only for different metrics but also for different management practices. Even slight changes in employee productivity in IT companies have a significant impact on shareholder returns. In such cases "human resource management" is no longer a support function but a core process for line managers.

It goes without saying that managing people is a key task for any company. But in a people business, this task becomes central to success

because employees represent both the major cost and the major driver of value creation, People-management measures that lead to even small changes in operational performance can have a major impact on returns.

Given the high financial stakes, people management needs to be a core operational process and not solely a support function run by the Human Resource Department. Line managers have a vital role to play in improving employee productivity, in terms of both business issues (such as whether to concentrate on large or small accounts) and management issues (such as how to create an organization and work environment that foster productive output). If success in a capital-intensive business comes primarily from making the right investment decisions, success in a people-intensive business comes from hiring the right people and putting in place processes and an organization that makes them productive (Barber & Strack, 2005).

Managers also need to ensure that employees' interests are aligned with a company's business objectives and their execution. It is crucial to keep employees engaged and productive.

1.2.1 Employee Productivity

The economics of people businesses like IT services and products raise unique compensation challenges. Just as people businesses are particularly sensitive to employee productivity, so are they many times more sensitive to pay packages than traditional businesses. Employees (unlike inanimate assets, such as manufacturing plants and brands) expect to receive all the returns to them. Furthermore, in a people business, compensation involves more than how much to pay employees; it is also the primary determinant of shareholder risks and returns (Barber & Strack, 2005).

Variability is at the heart of people-business compensation because productivity differs dramatically from one employee to another, depending on an employee's capabilities and the efforts of individuals or teams. Compensation that recognizes, measures and compensates this variability in terms of appropriate pay packages on an annual basis, is an appropriate strategy when it comes to most employees in people businesses like IT services and products.

Performance-based variable pay needs to reach far down into the organization. In people-based businesses, unlike typical capital-based businesses, mid-level and low-level employees can have a tremendous impact on performance. An emphasis on variable compensation in a people business has benefits beyond the obvious one of generating those operational improvements that can so dramatically boost performance. It can also significantly reduce the volatility of earnings and thus make the company more attractive to investors by reducing their risk. Because employee costs represent such a large portion of total costs, even small changes in the level and structure of compensation can have a major impact on the level of profits. Take a typical people business with operating profits that are 15% of employee costs. If, over the course of an economic cycle, the company pays out 85% of employee costs in fixed salaries and 15% of employee costs in the form of profit-variable bonuses, operating profits will be half as volatile as they would be if the company paid out, over that cycle, an equal amount but all in the form of fixed salaries. The compensation for this shift in risk from shareholders to employees: Companies with strong performance typically pay their employees better than their competitors (Barber & Strack, 2005).

1.2.2 Value Creation

Economies of scale and experience in people businesses have tended to be less significant than in industrial businesses, where processes are embodied and learning institutionalized in machinery or software. That means large people businesses don't necessarily have cost advantages over smaller competitors, indeed, often quite the reverse. A people-oriented business such as a software company, with a big investment in future-focused and largely fixed-cost activities such as R&D, will clearly see a cost benefit as sales volume increases. But a strictly defined people business, with its near-term value creation, generally won't. This makes it critical for people businesses to price their products or services in ways that enable them to capture a share of any additional value they create for customers (Barber & Strack, 2005).

The most basic approach is pricing by the hour, normally called a body shop model. Even high-skill businesses such as IT services commonly "shop bodies" at an hourly rate to customers that want to manage capacity flexibly. The value added by the company above that created collectively by its employees typically is limited, as is the return to the company.

A potentially more attractive pricing scheme is the fixed-price-for-output contract. A company that works more effectively and thus delivers a product or service at a lower cost or of a higher quality than its competitors (or its customers) can benefit from this approach. By completing the work in less time and with fewer people, the business adds value beyond that delivered by the employees. One way for an organization to achieve this is to focus on a particular activity in order to accumulate experience and know-how. This will typically lead to higher returns because, with the right management,

experience will improve the speed, quality, and cost with which the service can be performed (Barber & Strack, 2005).

1.3 Implications for Strategy

The progressive possibilities from human resources suggest a number of larger business strategy issues raised by the economics of a people business. Because the most important "assets" of such a business can walk out the door when they choose, the company needs to leverage its people with something that it creates, something that is scale sensitive, something that will allow shareholders to share returns with employees.

Truly successful people businesses are those with economic profit that is 30% or more above their employee costs, rather than the typical 10% which have created assets that make the companies much more than the sum of their employees.

Each of these IT services and products companies, despite the people-intensive nature of their businesses, moved far beyond an offering based on the short-term value of individual employees' work, in the process becoming less like strictly defined people businesses. In fact, the goal for many people businesses looking to increase returns will be to move out of that category by leveraging the value of their people-oriented activities to build intellectual or brand capital or even physical capital, such as the data centers of IT services companies. Ironically, as companies develop proprietary content and add value beyond that which their employees provide in their daily work, top management may conclude that shareholder value can best be created by outsourcing or franchising people-intensive activities (Barber, F & Strack, R .2005).

Such a shift reflects the constant evolution of an increasingly people-based economy and highlights the need for senior managers of people-intensive businesses -- as well as the investment community -- to creatively develop and apply a new set of performance measures and management practices.

In some IT services and products companies, a substantial percentage of employees (or contractors) are engaged in activities of developing a new generation of software or to some extent, building a brand that is aimed at creating future value through the development of intellectual capital or some other intangible asset.

A business that is not only people intensive but also future oriented is different in some important respects from the people businesses that focus on generating current value. For one thing, employee performance is harder to assess using measures based on annual financial accounts, as this year's work may create value only in subsequent years. Although it is usually possible to measure employee productivity fairly accurately at a corporate level, methods to assess the current performance of an individual or a team are more problematic. Consequently, performance-related compensation needs to be long-term, like stock options for the software engineer, as opposed to annual bonuses for the investment banker or the department store manager. In addition, while the performance of current-oriented people businesses is exceptionally sensitive to day-to-day operations and employee management, future-oriented businesses tend to be extremely scale sensitive (Barber & Strack, 2005).

1.4 Importance of HR in Software Industry

According to Som Mittal, former President of NASSCOM, IT-BPO industry's foundation is human resources and growth, – linear or lateral, which

would necessarily mean more hiring. The impact of the slowdown may remain for a few quarters and the growth will be back. To put things in perspective, the Indian IT-BPO industry currently employs two million individuals directly, and indirect job creation is estimated at about 8-9 million. If we were to take a look at this industry's contribution, it has taken over the responsibility of training and 'finishing' of the workforce – with 16-18 weeks of robust on-the-job training, even as India's education system reforms itself. On an average, top 10 companies hire in excess of 20,000-25,000 individuals in a year from campuses in a staggered process, since no company has the capability to absorb all these candidates at one go. These candidates are then trained to deliver at a global competence level. The industry then offers them a world class work environment, where they service global clients and work on cutting edge technology (Business Today, November 2008).

In recent times, there has been a lot of skepticism regarding employment. There are certain anecdotal stories but these are topical and client specific. It is important to view these through an educated viewpoint. With the current economic downturn across the world, companies would tread cautiously. The industry will raise its entry bar. This is a combination of factors that include India's leadership edge in this space and as a corollary, this has raised the expectations of customers and employers, and hence we need to meet the standards, if not exceed them (Mittal, 2008).

NASSCOM's preliminary research in 2009 indicates that although there may be a slight impact on new hires, the trend to hire will continue. This is good news in the current times. Certain factors that are likely to guide and set the trends for fresh recruitment in the industry are noticed. These include

- Lowering of attrition levels by 6-7 per cent;
- Broadening of the manpower base – over the past five years the industry has grown from employing 4,30,114 in 2000-2001 to two million in 2007-08— thereby the percentage of new additions is tapering;
- Increase in productivity and utilisation levels – hires are now being made closer to deals.

In terms of upcoming trends, while there may be a few specific verticals like mortgage and financial services that are directly impacted, others like healthcare and utilities continue to grow as per the projections. The drivers of hiring in the next few quarters will include factors like ‘lack of technically equipped resources in the US’; ‘changing demographics of the world’; ‘transformation which is happening at a rapid pace’ and ‘shortening of time to market which calls for greater competencies, that India possesses’ (NASSCOM Newslines, 2008).

The following section explains about the key HR challenges faced by the Human Resource Management, present Infrastructure of the present Indian IT, Competitive Status of the IT industries and Human resources issues arise in the economic slow down of the economy around the world.

1.4.1 Attract the best talent

In a tight job market employees face the dilemma of facing demand for the same kind of professionals. In their quest for the best manpower they are trying to find the right combination of organizational job and reward factors which contribute to attracting the best talent in the market. The Indian software industry suffers from a shortage of experienced people such as systems analysts and project managers, and attracting them is a key HR challenge.

1.4.2 Workforce Retention and Motivation

Retention and motivation of personnel are major sources for concern. Given the endless number of opportunities and competitive pay packages, attrition is on the increase. HR managers believe that the keys to retention are salary and career satisfaction. Money could be a prime motivator for beginners, but for those into their third or fourth job, their value-addition to the organization is more important. Monetarily, offering 'the best salaries in industry' is the minimum every company is doing, apart from performance-based bonuses, long-service awards, and stock options. Many organizations frequently conduct employee satisfaction and organization climate surveys, and are setting up Manpower Allocation Cells (MAC) to assign 'the right project to the right person'. In fact, some are even helping employees with their personal and domestic responsibilities in their bid to satisfy & motivate workforce.

1.4.3 Compensation and Reward

With a progress in technology demand for higher pay too has gone up. This makes incentive compensation a significant feature for software companies. With the determinants of pay being profit, performance and value-addition, emphasis is now on profit sharing (employee stock option plans) or performance-based pay, keeping in view the long-term organizational objectives rather than short-term production-based bonuses. Skills, competencies, and commitment supersede loyalty, hard work and length of service. Hence compensation packages have to be designed accordingly.

1.4.4 Being the best employer

Selecting the right place to work is imperative for all software professionals. The global nature of this industry and the 'project-environment' has added new cultural dimensions to these firms. In a value-driven culture,

values are determined and shared throughout the organization. The areas in which values are expressed are: performance, competence, competitiveness, innovation, teamwork, quality, customer service, and care and consideration for people. Flat structure, open and informal culture, authority based on expertise and ability rather than position, and flexi-timings are some of the norms software firms follow to gain an edge over their rivals.

1.4.5 Integrating HR Strategy with Business Strategy

The strategic HR role focuses on aligning HR practices with business strategy. The HR professional is expected to be a strategic partner contributing to the success of business plans, which to a great extent depend on HR policies pertaining to recruitment, retention, motivation, and reward. The other major areas of concern for HR personnel are management of change, matching resources to future business requirements, organizational effectiveness, and employee development.

1.4.6 Encouraging Quality and Customer Focus

With the advent of globalization and rapid technological change, quality and customer orientation have become the major driving factors for all companies. Hence, the HR professional as a strategic partner needs to encourage a culture of superior quality to ensure customer satisfaction. To be competitive today, an organization needs to be customer responsive. Responsiveness includes innovation, quick decision-making, leading an industry in price or value, and effectively linking with suppliers and vendors to build a value chain for customers. Employee attitudes correlate highly with customer attitude. The shift to a customer focus redirects attention from the firm to the value chain in which it is embedded. HR practices within a firm should consequently be extended to suppliers and customers outside the firm.

1.4.7 Up-gradation of skills through retraining

Rapid and unpredictable technological changes and the increased emphasis on quality of services are compelling software businesses to recruit adaptable and competent employees. Software professionals themselves expect their employers to provide them with all the training they may need in order to perform not only in their current projects, but also in related ones that they may subsequently handle within the organization. When the rate of technological change is high or higher than the time required to acquire competence in one area, professionals could undergo psychological turbulence owing to the need to work in a new technology throughout their career. They need to gain new knowledge, which will be utilized by their organization. On the basis of the new learning they want to work in higher segments of the software value chain. Therefore, constant up-gradation of employee skills is a major responsibility for HR.

1.4.8 Critical role of HR in Separation

It is a misconception that the role of HR ceases with the separation of the employee from the organization. The separation process is very complicated and leads to legal actions in many cases which will continue for a number of years. Hence it is worthwhile to understand the process of separation in order to make the exit of an employee a smooth process.

All employments are fundamentally a contract between the employer and the employee and the terms and conditions mentioned in the appointment letter form the basis of the contract. There are explicit and implicit conditions over and above the term generally mentioned in the offer of employment. These conditions vary among organizations. The HR is expected to have thorough knowledge of these provisions.

1.5 Infrastructure

India's core proposition of talent, quality, security and cost advantage has been complemented by rapid growth in availability of high quality telecommunication connectivity across the country. Progressive policy reforms continue to help drive down telecom prices towards internationally competitive levels, increase penetration and facilitate adoption of the latest, most efficient and economical technologies. Apart from this, cities across the country have witnessed steady growth in office facilities, hotels and other supporting business infrastructure matching global standards. Physical connectivity, via road and air has also been stepped up over the last few years (NASSCOM Strategic Review, 2006).

1.6 Competitiveness Review

Feedback from several MNCs having multi-country operations as well as syndicated analyses comparing the various sourcing locations has revealed that India continues to offer and deliver the best 'bundle' of benefits sought from global sourcing. With significant potential still untapped, it is expected that the global sourcing phenomenon will continue to expand in scope, scale and geographic coverage. As global delivery matures, multi-location strategies will become the norm and most sourcing destinations, including emerging locations, will grow in size. Building on its existing strengths, India will remain the leading destination and will continue to play an important role in most global sourcing strategies (NASSCOM Strategic Review, 2006).

A large proportion of the current IT services market is predicated on the banking, financial services and telecom verticals. While IT services for these verticals will continue to show strong growth, new verticals will need to be developed to increase the rate of growth of the IT services market in India. As

the Indian economy further opens up, other verticals including manufacturing, travel and tourism, healthcare, entertainment will increasingly look towards IT to increase competitiveness. For both new and existing verticals, the small and medium business (SMB) segment will represent an important source of growth for the domestic IT services market (NASSCOM Strategic Review, 2006).

India is among the few countries to have a rising share of working age population over the next few decades. The combination of a young age profile and a strong network of academic institutions is helping the growth of the already large stock of human capital in the country. India is projected to be the only country to have a significant population surplus in the working age group by 2020 while most developed countries are likely to face a deficit. India's human capital advantage is a key attraction for foreign investment not only as a sourcing destination, but also as a large and growing market.

1.7 Human Resource issues in the time of the Global Economic Slowdown

The manpower situation is undergoing a major change as IT-BPO companies deal with the slowing global economy. The dynamic marketplace is also pushing HR within companies to evolve a new and more important role for itself. The global economic slowdown has impacted organizations across the world, creating a scenario where uncertainty, job losses, hiring and salary freezes have become the norm. In this situation, the role of HR within organizations is undergoing a significant change as well. From managing the expectations of employees and guiding them towards their performance goals, to preparing staff for cost cutting and surviving the economic crises, HR is having to transform itself and take a fresh look at organizational goals and how employees can meet them (NASSCOM Newslines, April 2009).

The role of HR itself is becoming more critical for companies today, as they bank on these specialized professionals to steer them through the slowdown. Not only do HR professionals have to communicate information about the economic slowdown and its impact on their companies to employees accurately and honestly, they also have to come up with ‘people’s’ strategies that will enable their organizations to hold on to existing valuable talent without hiking their wage bills. In a number of organizations, HR is devising unique and innovative ways to enhance employee productivity and efficiency, while maintaining headcount. Strategies such as flexi-timings and ‘work-from-home’ are emerging on the radars of companies, alongside the traditional freezes on annual increments and hiring from B-level campuses (NASSCOM Newslines, April 2009).

The HR issues to be dealt with more precisely are:-

1.7.1 Dealing with compensation issues

According to a recent study by Hewitt Associates a leading global HR consultancy firm, companies led by their HR departments are tightening their people processes to deal with the economic slowdown. The research, aimed at gauging the impact of the slowdown on compensation and salary trends and based on a survey of 150 well-known corporate in the country, indicates the following: (i) 63 per cent organizations have factored in inflation and rising input costs in their salary increase budgets for 2009 (ii) Indian companies have lowered the average salary projections for 2009 by a percentage point at 13.9 per cent, as compared to the previous year (iii) Companies are looking to balance the pressures of inflation and lower HR budgets by raising productivity (57 per cent) and redeploying manpower (31 per cent) (iv) 30 per cent companies have said that they have increased performance linkages to

counter fixed-pay increases (v) 20 per cent have initiated a hiring freeze or a slowdown in recruitment Recognizing that there is life beyond the IIMs and IITs, a number of companies are also seeking talent from India's second rung techie and B-Schools, especially campuses based out of Tier 2 and 3 cities in the country (Newslite, April 2009).

1.7.2 The impact on manpower demand

The impact of the economic downturn on the manpower situation within the Indian IT-BPO industry is that challenges exist with the demand patterns shifting from a numbers-driven entry-level talent focus to a quality-driven middle management focus. The manpower demand scenario has shifted the employees' labour market to employers. Hiring plans are, of course, a function of growth for most Indian IT-BPO companies. Most IT companies have focused on domain-specific, middle management recruitment, due diligence in succession planning and onsite resources rotation, where the companies are rotating associates every 18 months at onsite locations. As part of its manpower planning strategy, many companies have increased their span of control to increase utilisation / chargeability. The base is much wider than earlier. A team leader who traditionally managed 5-7 associates earlier, will now manage around 7-10 people. Hence the team pyramids are undergoing drastic change in many companies.

1.7.3 Reaching out to the employees

In an effort to keep employees abreast of the global developments and reassure them about the company, many companies have put in place a strong communications programme. In this way, it is reaching out to its associates regularly. Many companies have focused on communications, to keep employees 'in-the-know' and maintain transparency. Constant communication

is important to keep staff members motivated and gain their confidence. But at the same time, it is by being transparent that organizations can help employees face the reality and develop their skills to deal with the situation. Regular and transparent communication makes employees feel more responsible, empowered and drives them to bring more value to the table. Many CEOs travel to different centres in India and abroad for a unique face-to-face interaction with all employees and talk about the company's performance in the previous year, future strategies and arrive at decision in the most collaborative fashion.

Most companies reaches out to employees through either online or offline forums on a regular basis. The aim is also to use these planks to elicit employee feedback and suggestions on how the company can convert emerging threats into opportunities. Taking into account the current scenario, and the need to involve employees in the ideation process, HCL Technology's CEO has also begun the process of reverse blogging, where a blog is posted on critical issues relevant in the existing scenario and employees respond with their own solutions and recommendations.

1.7.4 The role of HR in tough times

Industry watchers state that these are 'all hands on deck' times for the global IT services and BPO industry, where HR is carving a significant place for itself. HR now needs to take thoughtful action, encourage employees to introspect to improve themselves, focus on training and retraining employees and above all, initiate strategies that help the company retain existing customers and find new ones. HR is working on keeping staff motivated and engaged. It is ensuring that the right systems and processes are in place to reach out to the employees on a regular basis and that training and enhancing productivity are given due attention.

“In recent times we have invested a lot in training and developing our associates at all levels. This has led to a participatory culture where associates, managers and leaders apply the same holistic model. They view organizations through all four frames (employee, shareholders, customers and society); this gives them an array of options and development opportunities,” comments Anurag Jain, President, Applications Solutions (AS) and Insurance & Business Process Solutions (IBPS) and Managing Director, Asia Pacific, of Perot Systems (Newslines, April 2009).

When employees / associates are more skillful because of an organization-wide development initiative, they become more confident and alert. It is seen that such initiatives help associates to improve on bargaining, become more open to training, learn how to celebrate success, and lose their fear to re-organize and reframe. A change in attitude is brought out and this leads to the development of a passionate, committed, flexible, and ethical, as well as understanding and responsive workforce that can move the organization forward in the constantly changing business environment.

Recognizing that potential hires or job aspirants with domain expertise are a big draw in today’s unusual circumstances, HR is also working on helping employees improve their skill sets. Many companies are designing their competency framework to address this growing demand of defining and adding layers to the employees’ career path.

The prevailing market scenario has highlighted the need for companies to cross train and multi-skill their employees to gain even more relevance in the current context. The emphasis today is on increasing investment in domain-specific, technical and behavioral trainings. However, there are organizations that are cutting back on expensive external or classroom-based

training because of the downturn, using ‘on-the-job, experience-based development’ as an effective employee retention driver.

Clearly, the existing environment requires companies as well as their HR teams to think out-of-the-box, and come up with innovative approaches to survive the downturn and hold employees together. Innovative approaches would motivate the employees in software companies to utilise their set of skills and knowledge through discretionary effort realizing firm’s business strategy. This approach to human resource management is likely to contribute to improved economic performance of the firm. Innovative arrangements also have the potential to increase employee morale, thereby improving performance through reduction in grievances and through greater effort and diligence. Researches have shown that HRM innovations not only result in tangible organisational results but also assist organizations in developing innovative solutions as the need arises.

On the contrary, there are at times HRM innovations fall short of expectations to achieve outcomes such as favourable employee attitude and behaviour. Research evidence on the relationship of Innovative Human Resource Practices with employee attitudes are still very limited (Agarwala, 2002). Hiltrop (1996) provides some evidence indicating that best practices encouraged employee attitudes and behaviour towards strengthening the competitive strategy of an organization.

This study tries to focus on whether the importance, introduction and satisfaction of innovative human resource practices lead to favourable or unfavourable outcomes among the employees in the software firms in Kerala. To put it tersely, the researcher attempts to study the attitudes and behaviour of software professionals resulting from the innovative human resource practices of their respective firms.

1.8 Organisation of the Report

The study is organized in seven chapters. Chapter 1 is an introduction to the study. Chapter 2 gives an overview of the importance of HR in the software industry. Chapter 3 presents the review of literature. Chapter 4 describes the research methodology used in the study. Chapter 5 presents the data analysis of innovative HR Practices and HR outcomes. Chapter 6 illustrates the integrated model linking innovative HR Practices and HR outcomes. Chapter 7 sums up the findings and conclusions.

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IMPORTANCE OF HR IN SOFTWARE INDUSTRY

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	2.14	Conclusion

Having discussed Indian software industry and the importance of people in software companies, this chapter discusses the importance of HR with specific reference to the software industry in India. A careful scrutiny of the work in the Indian software industry, workforce in the Indian software industry and how HR as a process and function is organized in this industry in India has been undertaken and reported here. An elaborate review of literature undertaken to set the contextual background for the study has also been presented in this chapter

The past few years have been the most threatening period for enterprises that use, manage, or deal in information technology (IT). The source of the tumult has been people i.e., the demand, supply, selection, recruitment, and, especially, retention of IT professionals worldwide (Guptill et al. 1999). Information technology and systems can contribute significantly to sustainable competitive advantage in the marketplace (Agarwal and Sambamurthy, 2002). The resulting challenge for many IT managers is to identify, recruit, and retain competent IT staff that has the necessary skills to manage and deliver the firm's IT needs. Since late 1996, IT professional compensation has soared, turnover has rocketed to 15% to 20% annually, job-hopping has become the norm and only eight out of ten IT positions get filled with qualified candidates (McNeely et al. 1994). These trends place both IT executives and human resources (HR) managers under intense pressure. The risks are effectively high, not only for the IT department, but for the business as a whole.

The nature of work and workforce and hence HRM practices are substantially different from those in 'old economy' companies, To know more about the context in which people in IT firms function, the researcher looked into the work and employment characteristics of the workforce, work culture and organizational control, and the human resource management practices in Software products and services firms.

2.1 Software Work in India from a Labour Process Perspective

Labour process is defined as the way one looks at how work is done. It includes how workers relate to each other, how the work is organized, and most importantly how the work process is controlled and coordinated (Greenbaum, 1988). In the west, studies that focus on software work from a labour process perspective fall into two competing camps—the first draws

heavily on a Marxian framework and perceives software work as ‘task fragmented’ \ or ‘deskilled’ while the second view holds that software work is not task fragmented.

The Indian software workforce in the labour process is similar to that described by Orlikowski (1988) with regard to Western software workers. She uses Derber’s notion of ideological proletarianisation, in which ‘...professionals maintain an unusual degree of skill and discretion in carrying out specialized technical procedures, (but) they are increasingly stripped of authority to select their own projects or clients and to make major budgetary and policy decisions’ (Derber, 1983). There is also a process of technical proletarianisation which indicates loss of control over the process of work itself, similar to manufacturing assembly line workers.

2.2 Work in the Indian Software Industry

The people factor has been very important for the growth of the Indian software services industry, because the industry works on the human resources (HR) augmentation mode. This means that the revenue of an organization is directly related to the number of projects executed and number of people working on a project (TSchang, 2001). In other words, the number of software workers is an indication of the revenue of the organization. This is in direct opposition to software products companies, which have fewer employees but higher labour productivity. Software workers in India are highly paid (Dataquest, 2001b), and software work is one of the most preferred occupations for the young (Akhilesh, 1991; Spaeth, 2000). But from the point of view of outsourcing companies, software labour is relatively cheap. It has been well documented by researchers (Heeks, 1996; Arora et al 2001; Kumar 2001; Nath & Hazra, 2002) that Western countries prefer India for the outsourcing of their low skilled work due to low labour and other costs.

The Indian software company is predominantly export-oriented and Indian firms mainly execute projects outsourced by Western clients. The support and maintenance part of the software development cycle dominates the industry. A project is usually into four major stages; analysis and specification of software requirements, design of software, coding/writing and testing, and delivery and installation. The first two stages are completed 'onsite' (at the customer's site) and the third stage is outsourced to India. Cusumano et. al (2003) and Heeks (1998) claim that the 'waterfall' model of software development is followed by most Indian firms. Agile methodology is also followed by some Indian firms for software development. India has the largest number of firms with quality certifications in the world, a fact that according to Prasad (1998) leads to routinisation of software work. Under these conditions, we may expect to find empirical support for the task fragmentation view. However, recent observations (Ilavarsan,2005; Parthasarathy & Aoyama, 2006) suggest that there is an increasing amount of high skilled work flowing into the industry, a fact that tends to contradict this argument.

2.2.1 Division of Labour into Conception and Execution Tasks

According to the task fragmentation theory, activities involved in the software production process are divided into conception and execution tasks. The activities present in the first two stages of the software production process—'conception of the idea for the software and preliminary analysis and designing—are conception tasks, while other activities involved in the later stages such as coding, testing and maintenance—are execution tasks. Accordingly, one would expect to find software workers clearly divided into conception and execution workers. Conception workers are those who perform high skilled activities while execution workers perform low-skilled activities.

Besides on analysis of work content study by (Ilavarsan, 2008), it can be argued that the software production process cannot be segmented into discrete stages of conception and execution. Factor analysis (principal component analysis with varimax rotation) was performed on 32 tasks listed in the task inventory of the total variance of the data. The composition of the resultant six factors clearly indicates that they do not reflect discrete stages in the software development production process. For example, factor 1 includes the following tasks; writing specifications, low-level designing, coding, debugging, programme testing, documentation and preparing housekeeping programmes. Within the same factor, tasks related to three different stages of software production, both conception and execution-designing, writing and testing-are present. Other factors also entail tasks from various stages of the software production process. The alternative view (Orlikowski, 1988) is that the software production process is an iterative process in which discrete division into stages is not possible.

2.3 Roles in Software Development Projects

Software work is executed in the form of projects and each project involves certain roles. The roles in the project give a general outline of activities to be performed by workers. There are usually four roles present in a project; developers, module leader, project leader and project manager. These four roles are constant in the industry, irrespective of the type of organization. In some organizations, different labels are used-for example; module leaders may be called team leaders or technical leaders and project managers as business managers. Software organizations do not have definite role descriptions like ordinary job descriptions and there are no recorded or written guidelines to divide work among roles in the project. Although role descriptions are absent, a general outline of activities associated with each role

can be deducted. It was found that roles performed by workers in a project are taken more seriously than their positions or designations (Ilavarsan, 2008).

2.4 Software Development Process

Due to structured programming, the software development process has been formalized. A project is divided into smaller modules by managers using specialists, and each module is given to a separate group of coders and testers. The coders and testers are engaged in activities that do not need any analytical skills. Moreover, coders and testers working on a module do not have any knowledge of the other modules. By performing only the execution part of the work, they experience 'routinisation'. According to the task fragmentation view, execution workers do not participate in the conception part of the project. In the Indian case, software workers are not divided rigidly into conception and execution workers and all the different categories of workers tend to perform both types of activity. This implies all the categories of workers participate in the conception part of the project.

When a project is contracted to an Indian firm, the skills required for the project are matched with the skills available. Workers with the required skills are selected to form a team. The selected workers could be those 'on the bench' (the period during which a worker is free after a project is completed and is waiting to be allotted work), or those who are working on other projects but are transferable. There is a separate department in software organizations that keeps an account of the skill sets of all the workers. This department is known as the Resource Management Group (RMG). The role of the RMG includes forecasting, resource planning, resource allocation, resource utilization, and to trigger recruitment. The department in TCS is known as Manpower Allocation and Task Committee (MATC). Based on the availability of skills, work is allotted. If the required skills

are unavailable, workers are trained to meet the demands of the project. There are no clear-cut book-like instructions available for distributing the work in the project. Boundaries blur between the module leader and the developer.

Exhibit 2.1. Work content for different categories of software workers

Frequency of Tasks performed	Activities of categories of workers with Approximate Roles played in the Project.
Category 1 Developer	
Very frequently	Coding, Debugging
Frequently	Documentation, Programme testing
Sometimes	Writing programme specifications Low level designing: Link testing; System testing; Interval reviewing
Occasionally	System architecture; software architecture; Determining users requirements; Estimating cost and time; Technical scoping; system specification in user terms; System specification in technical terms; High level designing; External reviewing ; Preparing housekeeping programmes; User guide Preparation; Training users; First level support to users; System maintenance and support; training: Module Management
Never	Selling idea to users: Auditing: Recruitment: Evaluation of members: Firm –Level Policy making; Project Management; General Management
Category 2 (Module Leader / Developer)	
Very Frequently	Nil
Frequently	Writing programme specification; High level designing; Low level designing; Coding; Debugging; Documentation: programme testing” System Testing; Internal reviewing .
Sometimes	Determining users requirements; estimating cost and time; Module Management; System specification in technical terms; system specification in user terms; Technical scoping; Software architecture; Link testing; General management

Occasionally	Project management; evaluation of members; External reviewing; First level support to users; Preparing housekeeping programmes; Selling idea to users; System architecture; System maintenance and support; Training; Training users; User guide preparation and Recruitment.
Never	Firm-level policy making; Auditing; General management.
Category 3 (Module Leader/Project Leader)	
Very Frequently	High level designing; Low level designing; Programme testing; Link testing; Internal Reviewing
Frequently	Determining users requirements; Estimating and time; Technical scoping system; Specification in technical terms; System specification in user terms; Writing programme Specification; Coding; Debugging; Documentation; System testing; Module Management; Project management
Sometimes	Software Architecture; Evolution of members; External reviewing; First level support to users; Preparing housekeeping programme; Selling idea to users; System architecture; System maintenance and support; Training: Training users: User guide preparation; Auditing
Occasionally	Firm level policy making; Recruitment
Never	Nil
Category 4 (Project Leader/Project Manager)	
Very Frequently	Nil
Frequently	Determining users requirement; Estimating and Time; Technical scoping; System specification in technical terms; System specification in user terms; Writing programme specification: Coding; Debugging; Documentation; System testing; Module Management; Project management
Sometimes	High level designing; Software architecture; External reviewing; Selling to users; General management; Recruitment: Module management; System specification in technical terms; System specification in user terms

Occasionally	Link testing; Low level designing: Programme testing; System architecture; System maintenance and support; Training: Training users; Auditing Firm-level policy making; Coding; Debugging; Documentation; System testing; Writing programme specification.
Never	First level to users; Preparing housekeeping programmes; User guide preparation

Source: Ilavarsan,V (2008) Software Work in India: A Labour Process View pp. **12-13**.

There are, however, a few cases in which workers can choose their work. If the organization is getting a project similar to an earlier one, the same team may be given the work. In this case, the same worker could be given a preference. But under normal circumstances, a team is dismantled after the completion of a project.

Due to the export orientation of the industry, the participation of Indian workers in projects varies from a limited role in conception, to the entire designing and execution. In certain projects, the client (abroad) completes the design and the rest of the work is done in India. In this case, Indian workers are primarily responsible for coding and testing. However, they have the freedom to suggest modification to improve the design of the project. In most cases, during the design phase, Indian workers are briefed about the ongoing work. It is common to see two parallel teams working both onsite and offshore for the same project, involving continuous interaction. Software workers have some participation in the designing phase also even when a project comes during a low level designing or coding phase. This helps them in coding better.

In certain projects, work related to all the stages of software production is performed in India. These projects are known as development projects. In such projects, an internal review of the design is conducted before its

execution. Any person in the team can suggest improvements in the design. All the team members have access to the specifications for the whole project, even though they work on a single module. The entire specification document is kept open for all team members. It is accessible to all. Team members can meet anybody to clarify the doubts. If any worker is able to prove that there is a mistake in designing, it will be corrected. Workers have the freedom to say that. If any worker is interested in participating in high level designing, he needs to put extra time in work, but the present work itself takes away all the time of developers.

Interestingly, when a 'bug' becomes too complex to solve within a team, help from outside is sought. The project leader contacts other project leaders who are working in similar areas. The team members are permitted to contact anybody inside the organization. Information about the bug or the problem in the programme is e-mailed to all members in the organization. Whoever is able to fix the bug or offer a solution is encouraged to do so, irrespective of the membership in the team. In some cases, when a problem cannot be solved internally workers from other organization are also contracted.

Information about all the projects is conveyed to all via the intranet. All the workers know who is working in what project, what technologies are used in the project and who the clients are. At various points in time, all the project members get an opportunity to interact either with the clients or the technical team of the clients. When video conferencing is arranged with the client, all the members attend it. Each knows their role in the project. Companies encourage employees to know about the whole project, including the other modules. The developers are expected to know about the links between modules. During the module integration system-testing phases, all the team members are present. It is better to give the big picture to the developers as they can work better. It is very helpful in integration.

There are periodic meetings among those working within specific modules and among those involved in the whole project. Module meeting are held more often than project meeting. In these meetings, the progress of the project is discussed, and any problems or issue related to the project can be raised by any team member. Members of one module team know about the other modules. They may not know the technical details of other modules in depth, but they know the logic of module functioning and how they are linked to the whole project.

Thus, it appears that all categories of workers participate in the conception part of software work. However, workers have limited freedom in the selection of projects in which to work; projects are thrust upon workers and the division of work is then decided within the project. Although there is a common perception that the role played by workers can change in subsequent projects, the role played by individual workers remains constant. The study could not find a single worker who performed the role of developer and then project manager in a subsequent project, or vice versa.

Ilavarsan, (2008) conducted a study to examine software work and the structure of the workforce in India from the perspectives of competing theories about the labour process in software production. The findings show that all categories of workers perform activities related to both conception and execution phases of the development process, all categories of workers participate in executing the project, and participation in the conception part of the process is not limited to any person or position.

2.5 Workforce in the Indian Software Industry

Various categories of workers in Indian software companies do not form discrete divisions in the occupational pyramid of the industry. Rather, they are more like the layers of skin in an onion. The workers in the outer layer partly

perform the activities of the inner layer along with the activities dedicated to their own layer. A new worker enters in the innermost layer and reaches the outer layers in a similar way. For each inner layer the next outer layer denotes more years of experience in the software industry, increasing skill levels performing both managerial and technical activities, and increasing salary.

2.6 Major Characteristics of work and employment in the IT industry

There are three major characteristics of work and employment in the IT industry: (i) Mobility: Software engineers are highly mobile, circulating between India and 'onsite' as well as between jobs within India and outside. This phenomenon of 'virtual migration' - (i.e. offshore, online work) can be seen as a form of 'immobile mobility' in which labour moves without the body of the worker (Aneesh, 2001a). (ii) Flexibility: Because of the highly competitive and global nature of the IT industry, it requires a flexible workforce. Flexibility is reflected in the software labour market and in the emergence of new forms of employment, for instance in the extensive use of temporary contract labour and the high level of fluidity in the job market. Within companies as well, flexibility is maintained through 'resource management' systems such as 'the bench'. (iii) Individualisation: The emergence of individualised employment relations is seen in the absence of collective identity among software workers, the high level of attrition, and the tendency to build careers by job-hopping. This, in turn, is linked to the volatility of the global IT market, the consequent lack of job security, and the emergence of the 'entrepreneurial employee' who must constantly upgrade his or her skills in order to remain marketable.

In addition, although the industry is 'moving up the value chain', most of the work continues to be low-end, creating a high level of job dissatisfaction because many employees believe they are over-qualified for their jobs.

2.6.1 Mobility of workers and work

The key characteristics of the IT workforce flow largely from its role in the global ‘informational’ economy, which requires workers who are mobile and flexible but which at the same time has created a new category of ‘virtual’ workers who work remotely from different ‘geographies’. As discussed above, the major trend in the outsourcing industry is towards offshoring: instead of workers moving to where the jobs are, as in the earlier ‘body shopping’ phase of the industry, jobs increasingly are moving to where the workers are, and they work remotely with colleagues and clients in other locations, most of whom they will never meet in person. Thus, while the global IT economy makes use of various forms of mobile labour, it is also producing new forms of labour immobility. Which type of labour is deployed, and in what combinations, varies according to the type of company and the nature of the project and work.

2.6.1.1 Onsite assignments

Onsite assignments are highly desired by IT professionals for several reasons. First, they get international ‘exposure’, which adds to their resumes. Second, it is possible to save a substantial amount of money. Engineers on short-term projects continue to get their Indian salary, which becomes a saving, plus they receive a daily allowance to spend while abroad, much of which they can bring back to India, virtually tax-free. Those on long term projects usually do not get their Indian salaries but are paid local salaries (in local currency) at the prevailing rate, but they are still usually able to save a lot of money to bring back to India. Techies attempt to live frugally while abroad in order to save money. Onsite workers are usually able to save Rs 100,000 to 200,000 by working in the U.S. for three months.

2.6.1.2 Virtual migration

While the Indian IT workforce is clearly quite mobile within the global economy, due to offshoring and the geographically dispersed nature of the software outsourcing industry, the physical mobility or circulation of workers is becoming less significant. New forms of mobility have appeared and have become central to the way in which the production and distribution of goods and services are organised globally – especially the mobility of ‘knowledge work’ minus the body of the worker. The spread of sophisticated information and communications technologies has enabled a large proportion of work in outsourced projects, including software development and testing, systems maintenance etc to be performed remotely or ‘virtually’. Taking advantage of this possibility to reduce costs and provide round-the-clock services, the Indian software outsourcing industry has moved rapidly towards the offshore model, reducing the need for software engineers to move physically among different locations. In the model typically followed today, software engineers located in India are linked into the computer networks of their customers abroad, working on projects as part of ‘virtual teams’ consisting of colleagues, managers and customers spread across several geographical locations.

This characteristic of software outsourcing, which is perhaps more significant than the physical mobility of software engineers, has been described as ‘virtual migration’ (Aneesh 2001a). He suggests that online software services should be understood as labour flows rather than movement of goods and services (as is usually done), because offshore services is basically a technique for supplying labour that is analogous to onsite work or bodyshopping. He points out that Indian software services companies are not for the most part supplying products but services (i.e., labour), and that similar work is done through both routes Aneesh (2001a). The main thrust of his

argument is that ‘labour migration’ no longer necessarily requires the movement of bodies, and that globalising forces can also produce localising effects by restricting labouring populations to their national territories. This kind of offshore/ online virtual work is one of the major developments that has been enabled by the new ICTs. One of the significant features of online labour is that programmers are directly connected to their clients’ machines, so that the client is able to monitor progress, check the quality of the work, and communicate with programmers as if they were on site. It also enables work to be carried out round-the-clock.

Thus, although the Indian software labour force is still geographically mobile to a large extent, it is becoming increasingly immobilised as more work is performed offshore. Or to put it more accurately, the bodies of workers are immobilised, since in many ways they are working elsewhere even while sitting in Bangalore or Mumbai, connected through computer and satellite link to their customers and colleagues located on the other side of the globe. While software companies still need to place at least a few engineers at customer sites in order to execute projects, the immobilisation of workers is almost total in the case of IT enabled services, which are performed completely offshore. The phenomenon of virtual migration is most visible in the call centres and BPOs, whose agents spend almost their entire working life interacting with foreign customers or engaged in work for clients outside of India. As Gephart (2002) notes, digitalisation has facilitated the flexibilisation of labour as well as the virtualisation and rationalisation of the work process, but at the same time a “diffuse mode of work and transnational capital flows affect labour which is culturally tied to a given locale”(Gephart 2002). The virtualisation of labour in the IT industry has had diverse and profound consequences in terms of the work process, forms of organisational control, and work culture.

Work and careers have been transformed due to the flexibilisation of labour, eroding job security, creating longer working hours and double shifts, and leading to individualisation in the workplace. In many ways, the Indian IT industry seems to be following this pattern, the labour market is highly fluid; companies follow a 'hire and fire' policy and refuse to be bound by existing labour laws; and there is a large proportion of temporary and contract workers in the workforce. But while the industry is known for its high attrition rates as well as job insecurity, these negative features of employment flexibility are offset by the high salaries and career mobility that have been made possible by rapid growth, and the sector appears to offer better and more secure employment opportunities than most 'old economy' industries.

Employment relations in the Indian IT industry are more flexible than what was typically found in the 'old economy'. One of the reasons could be that Indian software services business is primarily a 'numbers game': the success of outsourcing companies has been built partly on their ability to put a large number of programmers onto a job as soon as they are needed, so that they are able to execute projects more quickly than some of their global competitors (competing not only on price but also speed). What the Indian software services industry demands are large numbers of generic programmers and software engineers who are able to work on multiple platforms and languages, and so are not highly specialised in any particular one.

The Indian IT industry depends on flexible forms of employment, the key axis of 'flexibility' in Indian software services companies need to be able to quickly deploy workers on projects, send them onsite or bring them back to India as needed, and shift them among different technologies and platforms. The services companies are 'customer-centric' and compete sharply with one another for contracts (and now also with the large global service providers), so

they must be able to execute projects as and when they come, and within tight timelines. This is why the large services companies maintain a proportion of their workforce (up to 20 per cent, although companies rarely admit to this) ‘on the bench’ – these are employees who are not currently on projects and so are not ‘billable’, but are available for assignment. At the same time, it is expensive to maintain a large bench, so these companies also have large proportion temporary contract workers on their rolls. Because workforce flexibility is the key to keeping costs down, they zealously guard their right to hire and fire people as needed.

Although the Indian IT industry demands ‘flexibility’ in its workforce, especially the freedom to hire and fire depending on market conditions -- it also deploys strategies to retain employees in the face of high mobility (see following section). Companies attempt to keep their workforces stable by offering ever higher salaries, attractive working environments, and a variety of incentives. In Indian software companies, control over labour as well as access to sufficient labour are crucial and this is reflected in the continual complaints from the industry about the shortage of skilled manpower, the development of strategies to augment the supply of qualified workers, and the numerous industry-sponsored conclaves and discussions on HR issues. Strategies of control over labour include keeping a proportion of workers ‘on the bench’, use of contractors and temporary workers, various HR policies aimed at stemming attrition, and the recruitment practices. But on the issue of flexibility and attrition, Indian IT companies perform a kind of double speak: while they try to adopt ‘new economy’ practices of labour flexibility, HR managers deplore the fickleness of software engineers and the high attrition rates). But the flip side of the industry’s promotion of ‘flexibility’ is lack of company loyalty on the part of employees, who seek career mobility by changing jobs frequently.

There is ‘flexibility’ in terms of labour market and contracts in the IT industry, especially compared to India’s ‘old’, public sector dominated economy. IT employees do feel insecure knowing that they could lose their jobs at any time -- during a downturn or for ‘non-performance’ – but in India IT jobs are still highly desirable because of the high salaries they offer, and they are perceived as providing more economic security in the long run than most organised sector jobs, especially due to the buoyant job market since 2004. Thus, outsourcing to India has produced a degree of flexibility in the labour market and employment relations. The outsourcing of IT jobs to India has created an economic boom in this sector and led to upward mobility for its privileged employees.

2.6.2 Flexibilisation of workers

Another important aspect of flexibilisation pertains to the work itself and individual employees’ skill sets. Indian software engineers are known in the global market for their flexibility in terms of technical skills – their ability to adapt to new platforms and learn new technologies quickly. That they are regarded as more flexible and adaptable than their western counterparts, apart from being cheaper, has become one of their main selling points. The large services companies encourage this flexibility by moving programmers among different types of projects, platforms, and domains. As noted above, software outsourcing companies require ‘generic programmers’ rather than ones who are highly specialised in just one area because they need to be able to execute whatever projects that come along. Software services companies prefer generic programmers while software product companies prefer employees who stay with the company for a long time and gain in depth knowledge of a particular technical area.

A negative outcome of the policy of job rotation is that engineers are unable to develop expertise in any one area and so are not qualified to seek higher end jobs in MNCs or research centres, which require specialised skills. The software services industry produces ‘generic programmers’ who are able to learn quickly and pick up new skills, but this characteristic of the Indian IT workforce tends to keep workers at the low end of the software production chain. A feature that distinguishes IT work from that in other sectors is that IT people are thrown into new working environments on each project and are expected to adapt; this is seen as a major source of job-related stress.

2.6.3 Individualisation

The flip side of flexibilisation of the workforce is the high attrition rate that is said to plague the IT industry. While the industry desires a workforce that is mobile and flexible, this requirement has also created a culture of individualism in which employees pursue their own goals over those of their employers – who are in any case often temporary. This orientation to work and employment can be seen as part of the larger process of individualisation that is occurring in the workplaces of the new economy. Individualisation is defined as an orientation in which people centre their planning and actions around themselves based on an ideology of self-interest, rather than around collectivities of various kinds. In the case of the Indian IT industry too, this process is evident in several ways. One manifestation of individualisation is the absence of collective identity among ‘knowledge workers. In the IT industry or the ‘knowledge industries’ generally, the relationship between management and workers is very different from that found in ‘old economy’ industries, in that the line between ‘worker’ and ‘manager’ is fuzzy. There are several reasons for this. First, most employees are highly educated technical workers, so that the educational and social class differences

between 'workers' and managers is minimal. Second, due to the demographics of the rapidly growing Indian software industry, the age and experience gap between managers and workers is also minimal because software engineers tend to move into management positions at a relatively young age. Also, because of the team-based organisation of software companies, engineers may be promoted to the position of team leader within two to three years of starting their careers. Third, most IT employees aspire to managerial roles, which means that they tend to identify with management. All these factors militate against the creation of a sense of collective identity among software professionals, and reduce the possibility of conflict along the lines of labour versus management. Software engineers do not see themselves as 'labour' or workers in the classical sense, even though the structural position of 'individual contributors' in the software production process is in many ways no different from that of factory floor workers in manufacturing. This absence of identification as workers, and the fuzziness of the distinction between 'individual contributor' and manager in this industry, together with the upwardly mobile class aspirations of software professionals, explains the general lack of interest in unionization or collective action of any kind. Software engineers tend to deal with managements as individuals, whether in registering complaints or negotiating salaries, and when they are not satisfied with their jobs, they vote with their feet – at least when the job market is good.

One example of the individualised culture of the software industry is the individualization and lack of transparency in the salary structure. Although most companies claim that they offer salaries to new recruits based on standard benchmarks, in fact there is a great deal of negotiation that takes place, especially in the case of experienced engineers, during recruitment and

at the time of promotion as well. Promotions are based on individual performance appraisals, and salaries also have a performance-linked component, which means that there may be wide variation in compensation among engineers in similar positions. For these reasons, employees are not supposed to reveal their salaries to one another – a situation that promotes competition among them, even while cooperation and teamwork are emphasised as key values.

Another facet of the process of individualisation, which is also linked to the flexibilisation of labour, is the displacement of responsibility for the shaping of careers and the management of risk away from the corporation or the state and onto employees. This means that employees must be constantly upgrading their skills in order to compete in market. This is especially true in the rapidly changing information technology sector. Many IT professionals expressed the fear that they would be made redundant if they are unable to keep up with changing technologies. Indian software engineers have also excelled at flexibility in another sense -- at being able to pick up new languages or platforms quickly -- and this ability, together with the expanding job market in India, mean that the fear of obsolescence is not yet as acute here. From the point of view of software companies, IT professionals are their most crucial resource as well as the most difficult aspect of the business to manage.

2.6.4 Other Characteristics of work and employment in the IT industry

2.6.4.1 Job-hopping and attrition

The most common complaint of Human Resource (HR) managers across the industry is the high attrition rate (which usually refers to the percentage of employees voluntarily leaving the company each year, although the rates

quoted may include ‘involuntary attrition’ as well). The attrition rate had risen substantially again in the last couple of years before the economic slowdown as the industry has moved into another boom phase: companies have been recruiting heavily and there is a sharp demand for well-qualified software engineers. But regardless of the fact that these external market forces seem to play a major role in determining attrition rates, Indian software engineers have earned a reputation among HR managers as being ‘fickle’, a ‘coddled lot’ who quit if they are not given what they want.

From the corporate point of view, IT professionals have a wide choice of jobs and can demand whatever salaries they like, and headhunters and other companies do not hesitate to poach good employees, ‘non-poaching agreements’ among a few companies notwithstanding. So one of the main challenges for managements is to find strategies to retain key employees without giving in to what are seen as their excessive demands. While HR managers say that they do not prefer to hire people who have switched jobs many times, because it is an indication that they will not stick with the company, in fact they often do so because of the paucity of good candidates.

To understand the pattern of job-hopping that appears to characterise this industry, it is necessary to situate it within the larger social-economic framework that structures the career choices and aspirations of IT employees and that generates the ‘push’ and ‘pull’ factors that lead them to change jobs. These include the job market, the opportunities and career paths available, the culture of the industry, and the larger social milieu of the middle class that imposes certain expectations on software engineers based on norms of success and social status.

The older industrial pattern of lifetime employment in a single company is clearly not typical of the IT industry. According to the study by Upadhya &

Vasavi (2006) mobility appears to be higher among the younger age group, among those who have recently joined the industry. Of those who had been working for one to two years, only 37 per cent were still with their first employer, while of those who had been working for three to five years, 58 per cent were still with their first company. This difference may reflect the shift in the job market between 2000 (the peak of the downturn) and 2004, when the survey was carried out. From about 2003-04, the demand for software engineers has escalated and they find it easy to change jobs, whereas employees who started working around 2000 faced a tough job market and so perhaps continue to be less likely to leave their jobs.

Employment mobility is higher in the IT industry than in other sectors and there does seem to be a significant contrast between the 'old' and 'new' economies. The corporate tradition in India has been, until recently, close to the European pattern of life-long employment -- at least in public sector industries -- and even the private sector offered relatively stable employment. But the IT industry has tended to reproduce the American 'hire and fire' culture, perhaps because it has emerged in close relationship with American corporations. IT companies zealously guard their right to hire or retrench workers as needed, and the industry has resisted any moves to impose labour regulations on it. In this context, it is somewhat contradictory that companies complain about the high attrition rates and attempt to nurture employee loyalty. In fact, it is the IT industry itself that has ushered in a new culture in which it is considered normal to switch jobs every two or three years, and in which changing companies is often seen as the best way to climb the corporate ladder as well as a sign of personal growth. IT companies in India tend to replicate and promote contemporary American corporate culture, which values labour flexibility and individual achievement over long-standing employment relationships.

The Indian software services companies appear to want the best of both worlds: a balance between what is considered to be the ‘traditional’ Indian business culture of paternalism and employee loyalty, and the flexibility and individualism of the new workplace. Managers of Indian companies perceive their organisations as ‘blended’, a mix of the Indian and American model. The ‘Indian’ element consists of being more ‘people oriented’ – for instance, these companies claim that they are reluctant to lay off workers during a downturn -- while the American or ‘global’ element consists of individual achievement orientation and labour flexibility.

These considerations point to a contradiction at the heart of the IT work culture in India: contemporary management practices encourage individualisation and self-motivation of employees, creating a culture that tends to encourage job-hopping, as engineers give priority to their individual career goals over the needs of the company. At the same time, managements seek to induce employee loyalty through a variety of incentives and the creation of a ‘strong corporate culture’. They also attempt to bind employees to them or prevent them from joining competitors through employment contracts, which usually includes a ‘non-competition’ clause. This clause prohibits the employee, if s/he leaves the company, from joining another company that works in the same area within a certain period of time (usually one or two years). The ostensible reason for the non-compete clause is to prevent leakage of intellectual property to competitors, but such agreements may also have the effect of limiting the pool of jobs for employees who wish to change companies. However, these contracts are rarely enforced.

2.6.4.2 Job satisfaction

There are a range of both ‘push’ and ‘pull’ factors that lead software engineers to change jobs. According to the study by Upadhyya & Vasavi

(2006) among those who had changed jobs, one-fourth said that they were dissatisfied with their jobs, while half were looking for better pay and the rest for opportunities in their jobs. The reason is that there are very few passionate ‘techies’ and most are there only to make money. Many respondents said that software engineers have more job satisfaction when they are learning something new every day, or if they are doing technically challenging work. Most maintained that product companies give greater job satisfaction because they do critical, high-end work.

The unchallenging nature of much of the technical work that is outsourced to India also explains why most Indian software professionals aspire to move into management positions as soon as possible (or in many cases, to move out of the IT industry altogether). There are a few MNC research and development centres and high-end startup companies in India where original and intellectually satisfying work is being done, and the employees of those centres are very satisfied with their jobs. Moreover, in most companies there is no clear ‘technical path’ for career development, or rather, this track is open to very few employees, which means that the only way that software engineers can develop their careers is by moving into management.

Although more companies (especially the MNCs) are now receiving more design-related or high-end development work, the majority of Indian software engineers are consigned to jobs such as coding, maintenance, or testing, for which they believe they are overqualified, and which, together with the high stress and long working hours, lead to frustration and burnout. Augmenting this frustration is the fact that many software engineers said that they entered the IT industry initially, not because of an inherent interest in computer programming or information technology, but for other reasons, such as ‘there was an IT boom at the time’ or ‘because everyone was doing it’.

IT companies recruit graduates from all streams of engineering, which means that many software engineers are not doing the kind of work that they had originally intended to do, or were interested in. Many of those who opt for computer science or IT-related degrees were not really interested in the subject. As a consequence, one might expect many employees to be predisposed to job dissatisfaction even before they have started work. A number of respondents had given up the idea of working in the field of their choice, such as mechanical engineering, because of the much higher salaries offered by the IT industry, and because they were induced by IT companies during college opportunities, either in terms of salary or career prospects. Common reasons that were given for job dissatisfaction include 'the job is not interesting', 'work is monotonous', and 'I am stagnating'. A major reason for wanting to move to a new job is to get 'better work'. These responses suggest that a major reason for job dissatisfaction and consequent high attrition is the increasingly process-driven nature of software production as well as the low-end nature of much of the work available. Many software engineers complain about the routine, boring and uncreative nature of their work, and they seek more challenging work either by changing projects within the company or, if that is not possible, by changing companies.

Overall, the most common response was that the work is 'partly challenging and partly routine'. Those in research, consultancy and management jobs were more likely to say that their work is challenging and interesting, compared to those in lower-end jobs such as software development and testing. While many companies attempt to provide avenues to keep work interesting and challenging, the fact is that much of the work that is done in outsourced projects is low end -- coding, testing, maintenance, and the like -- and engineers are required to work on the projects on hand. In the large

software services companies, the most they can hope for is to switch to a different domain or technology, but after the new work is mastered, it again becomes routine.

The satisfaction in all jobs is the same. The job is interesting only for the first few months, and after that the individual gets bored. Several respondents had already been working in industries in the fields in which they had been trained before switching to IT for various reasons. When the primary attraction of a profession is not the work itself but the kind of career one can have or the money one can earn, it is not surprising that employees switch jobs frequently in search of higher salaries or better positions, and that there is, at the same time, a high level of job dissatisfaction.

2.6.4.3 Career development strategies

In the individualised culture of the software industry, as in the ‘new economy’ generally, career growth depends on improving one’s ‘skill sets’ and adding value to one’s resume through experience, certifications, and the like. Frustration with work may lead some IT employees to change jobs or even to leave the industry altogether, but perhaps a more important motivation for job-hopping is career development. Software engineers are acutely aware of the volatility of the industry and the job market; hence they constantly aim to improve their marketability and attempt to predict future requirements so that they do not become obsolete. In order to enhance their value in the job market, most software engineers are continually seeking to upgrade their skills and knowledge in order to keep up with rapid changes in technologies, platforms and domains. IT companies usually offer numerous technical training programmes, but it is often up to individual employees to seek the kind of training that they need to enhance their careers.

Some companies have the practice of subscribing to Skillport, an online training portal, where employees with the company provided user id and password could enter, learn and get certified. While companies do invest a certain amount of time and money in employee training, and most require a minimum period of training (both technical and soft skills) per year, there is a limit to how much they are willing to invest in any one employee, given the pattern of attrition. This creates a Catch-22 situation, in which employees begin to feel dissatisfied when their jobs or projects do not allow them to improve their knowledge, while companies are reluctant to invest too much in employees who may not stick to the job. The complaint among several software engineers is that they were not sent for training programmes when they requested for it (or even when it was requested by managers), due to their heavy workload, and so they were unable to complete the mandatory days of training, which in turn affected their performance appraisals.

Apart from upgrading their knowledge through training programmes and more informal means, IT employees seek to enhance their skills through new work experiences, either within the same company or by changing jobs. The large services companies tend to rotate employees among different technologies and products, a policy that is linked to the demand for 'generic' or jack-of-all-trades programmers. This gives employees a wide exposure, but a frequent complaint is that they have little choice in the kind of work or projects to which they are assigned, and are often consigned to routine debugging or maintenance work, which does not add to their technical experience. Those who are not getting the kind of projects that they think will enhance their skill sets are more likely to change companies. Similarly, many software engineers join services companies in order to get work experience abroad, and sometimes they continue in a frustrating job only in

the anticipation of an onsite posting. Failure to get onsite assignments is another common reason for moving, for it is by going abroad that engineers believe they get the kind of ‘exposure’ and experience that builds their resumes.

Everyone is focused on learning new skills because there is a high level of insecurity: everyone knows that at any time, the company might lose a project, or be taken over, and you could be let go any time. Companies want commitment and integrity from their employees, but no company can offer job security. From the individual’s point of view, they have to work out a strategy to survive in the industry. Young people are looking to add value not only to the company but also to themselves. So what people look for in jobs is not just compensation, but opportunities to build their skills. There is a safety net of knowledge - if you have that; you know that even if you lose your job you can get another.

Product companies are preferred by many IT professionals because they are said to offer scope for more independent, creative work and hence more job satisfaction. Similarly, MNCs are often rated higher than Indian companies as employers, not only because of the nature of the work, but also because software engineers perceive that “MNCs have certain standards”. For instance, they provide decent living arrangements for employees who are sent abroad; they also generally pay better and have higher prestige value. So many engineers plan their careers as an upward path that moves from services to products, from small Indian companies to the bigger Indian companies, and from large Indian companies to MNCs, and sometimes from MNCs to high-end startups -- in pursuit of more challenging work, relevant experience, better position, and higher salary.

In short, what is viewed as an incomprehensible pattern of ‘attrition’ by managements, reflecting lack of loyalty and short-sightedness, is actually a highly rational but individualised process of career planning on the part of software professionals. At the same time, it must be recognised that many software engineers do not have well thought-out long-term career goals. This pattern is also linked to the volatility of the job market and a sense of insecurity that many software engineers experience. Many underwent unstable job experiences during the downturn of 2000-02 and 2008-09; for instance several who had been campus recruited were later turned down by the companies, and remained unemployed for months until they were able to land jobs in small companies. Only when the economy started picking up were they able to shift to larger companies. Even for those who did not experience the downturn and unemployment directly, memory of this period underscores their feeling that IT is an unstable industry in which one’s future is never certain. Because they know that they may be laid off at any time, they keep track of the job market and keep their options open. Most techies, especially those who are young and unmarried, are willing to go anywhere for the right job, so their field in their job search is the entire world, not a particular city in India.

2.7 Work Culture and Management Control

The cultures of work and forms of organization and management that have emerged within the software services outsourcing industry are substantially different from those in ‘old economy’ companies, although there are also significant continuities. IT companies have imported a ‘new age’ management ideology based on flat structures, lack of bureaucracy, openness, flexibility, and employee empowerment. But, due to the requirements of the outsourcing business, new forms of direct or ‘panoptical’ control over the work process have also emerged, which are linked to the rationalisation of the

work process through the application of modular programming techniques and international quality standards. In order to soften the routinisation of work and the rigidity of 'process driven' management, and to build employee loyalty and motivation, IT companies employ 'normative' management techniques such as the inculcation of common values and emphasis on teamwork. This combination of direct and indirect modes of organisational control enables companies to maximise the productivity of employees.

Another distinctive feature of work culture in the software outsourcing is the deployment of culture itself as a management tool and as a mechanism of control over labour. This is seen in the incorporation of employees into a strong 'corporate culture' as a motivational strategy; in the deployment of 'cross-cultural' management theories; and in 'cultural sensitivity' training programmes. Through the discourse of culture that operates in the global software labour market, Indian software engineers are categorised in terms of their culturally specific work habits, which are contrasted with those found in the West. While the dominant management discourse claims to validate cultural difference within the 'multicultural' workplace, Indian software professionals are trained to adapt their behaviour and attitudes to fit into the dominant model of 'global corporate culture'.

A closer examination of the organization of software companies and their work culture, however, reveals a more complex situation: while most companies, especially large and medium size Indian companies, do have comparatively more open and flexible organisational structures compared to the hierarchical and bureaucratic organisation of typical family-owned businesses organizations in India, and they also offer employee-friendly human resource policies and very comfortable working environments, these positive features are often offset by periodic intense work pressure, long

working hours, and job insecurity. These negative features are outcomes of deeper structural factors, including the new management practices themselves. Moreover, there is a gap between the official work culture as described by managers and expressed in company policies, and the actual culture of work that develops spontaneously within any industry or workplace. It is necessary to describe both of these facets of work culture and to delineate their inter-relation, in order to come to a deeper understanding of work-related issues in the industry and of the concerns and aspirations of employees.

As in any service or 'knowledge' industry, 'people' are the primary resource for software companies. Recruiting and retaining a sufficient and qualified workforce is a central concern of software companies and their HR departments, due to which new techniques of organisational control and 'resource management' ('resource' refers to software engineers) are being continually tested and introduced.

While HR managers frequently complain about the 'fickle' and 'demanding' nature of their employees, the main grievance of software engineers concerns HR departments and HR policies. Most employees as well as managers reiterated the dominant line, lack of hierarchy, informality, a fun place to work as work culture. But a few individual voices pointed to these conflicts and to the gap between theory and practice. So despite the flat structures employee empowerment, and informality that are supposed to characterize these 'new workplaces', there are conflicts and struggles over control. However, these do not usually take an overt form, and the lines of confrontation are not clearly drawn as in labour disputes in traditional industries. There is fuzziness of the line between 'worker' and 'management' in this industry, and the fact that software engineers do not identify themselves as 'workers', reduce the chances of such conflicts occurring. However, there

are tensions between management practices and employees, most of which are related to the systems of control that have been evolved to manage these 'knowledge workers' (Upadhyaya & Vasavi; 2006).

2.7.1 Normative or indirect control

A central feature of 'new age' management is that employees, rather than being controlled and directed from above as in bureaucratic systems, are supposed to be empowered and induced to manage themselves through techniques of indirect or 'normative' control (Kunda, 1992). The key words here are worker autonomy, self management, self-motivation, and empowerment. This approach to management contributes to the process of individualisation in the workplace. Responsibility for completing work or making decisions is devolved to a large extent onto individual employees, who are motivated to perform because they identify with the company and its goals. For instance, software engineers are made to feel personally responsible for finishing their tasks on time even when faced with impossible deadlines, or when organisational obstacles prevent them from doing so. Productivity depends on the internalisation of company goals and work ethics by employees, and discipline is enforced as much by self and by peer pressure as by managers.

Two major techniques of indirect control that have been identified in the literature are team-based organisation and the creation of a strong corporate culture. Organisation into 'teams', and the promotion of an ideology of teamwork, are ubiquitous in software companies. Under this system, software engineers are grouped into teams of five to ten members, each led by a team leader, which are, in turn, linked together into a larger group, usually under a project manager. Teams are not always formed around specific projects or

units of work; rather, members of a team may be involved in several different projects at once, working with engineers from different teams. Because the logic of team-based organisation does not necessarily flow from the organisation of software production itself, one must assume that it has a different function – that of indirect control over the work process and over employees. Although managers and employees alike stress the informality of relationships and management style in the workplace, teamwork introduces a subtle yet strong system of control, for instance by invoking peer pressure in order to enforce deadlines or to induce team members to work extra hours. Because the progress of each individual's work often depends on the completion of work by other team members, they exert pressure on one another to finish tasks on time (Sewell, 1998). Through peer surveillance, one's work is continually being monitored, which adds to stress levels, according to several respondents.

While team-based organisation of work is meant to foster cooperation among engineers, it also tends to promote competition and conflict: for instance, individual team members are assessed on the basis of overall team performance (*vis-à-vis* other teams), which leads them to put pressure on one another to complete the work in time. At the same time, employees are assessed on their individual performance, which drives them to compete with one another for recognition and may lead them to withhold help or crucial information from other team members. There appears to be a contradiction between the ideal of cooperation and teamwork, and the actual individualised and competitive nature of work. For instance, one informant said that there is a tendency for people and teams to hide information from one another, and that they compete for recognition in the pursuit of promotions. This is one reason why software companies pay

close attention to forging and managing effective teams through training programmes and other such strategies.

Another key technique of indirect management is the establishment of a strong corporate culture. In modern management practice, the inculcation of a distinctive corporate culture is considered to be crucial for the promotion of employee loyalty and the 'alignment' of individual with company goals. The centrality of corporate culture to the management of software companies (as is the case also in most large companies and multinationals today) is indicated by the very visible modes of transmission and articulation of the official culture in these workplaces, from formal statements of the company's 'mission, vision and values' on websites and wall posters, to induction workshops, training programmes, team meetings, social events, and the like.

In theory, these techniques imbue employees with the dominant values and goals of the company so that their motivation to work comes entirely from within and they do not require external mechanisms of control. As a result, the employment relationship is no longer purely economic, but involves the shaping of the employee's very sense of self. However, the establishment and transmission of a strong corporate culture is not always easy and Indian software companies have faced numerous problems in using this strategy. Team-based methods of production are promoted as a departure from traditional management relations, and on the surface seem to relax controls. But Ezzamel and Willmott (1998) argue that it constitutes a new oppressive form of control by turning workers into unpaid supervisors. In her study of the Australian software industry, Barrett (2001) found that the focus on the technical aspects of work, personal opportunities, and flexible employee friendly policies meant that workers were unaware of any idea of exploitation. She identifies the strategy of

control adopted by the company she studied as one of “responsible autonomy” -- an attempt “to harness the adaptability of labour power by giving workers leeway and encouraging them to adapt to changing situations in a manner beneficial to the firm” (Barrett, 2001). Thus, the use of teamwork and the establishment of a strong corporate culture can be understood as strategies to keep attrition rates down as well as techniques of subjective or ‘normative’ control over the workforce. The study by Upadhyya & Vasavi, A. (2006) describe the social atmosphere at work in IT firms as ‘cooperative’, ‘friendly’, ‘informal’, etc by the large majority of respondents (85 per cent), but 27 per cent mentioned negative features such as competitiveness and backbiting. Again, positive descriptions decline with an increase in age and experience. These responses reflect the fact that most IT companies make concerted efforts to create a positive working environment, to bind employees by fostering a sense of commitment, and to promote a spirit of cooperation and teamwork.

2.7.2 Routinisation of software production and techniques of direct control

Although Indian software companies attempt to manage work through indirect techniques, the exigencies of competing in the global market have led them to introduce more direct methods of control as well. In fact, the work process, especially in software services outsourcing, is becoming more and more closely controlled and monitored, calling to mind the earlier Taylorist methods of factory floor management. There are several reasons for this trend. First, globally there has been a shift during the last two decades or so in the process of software development away from an individualised craft-like production system towards a factory-like production process in which the production process is routinised and rationalised (Barrett 2001; Beirne, et.al. 1998). This shift has been necessitated by the increasing complexity of

software products, projects, and programmes, the imperative of continually reducing time to market due to sharp competition, and the consequent need to divide work among many software engineers.

Second, the structural position of the Indian software industry in the global economy is very different from that of Silicon Valley. It is an outsourcing services business that relies on contracts with customers in the U.S. and other developed countries, and for this reason is very customer-oriented, as is any service industry. Projects are customer-driven and work is organised through virtual teams in which people at the customer's end are usually in control, directly or indirectly. Because of the way in which software services contracts are structured, projects are governed by strict timelines and deadlines, and the work of the offshore engineers is constantly monitored and evaluated from the customer site.

Third, and perhaps most important, is the trend in the Indian software industry towards standardisation of software production based on international quality certifications such as the ISO 9000 and CMM Level 5. Indian software services companies must compete not only with one another for customers, but also with the large global services software companies based in the U.S. and other developed countries. Their main challenge has been to create legitimacy and to reduce cost. As a way of signalling quality to potential customers, Indian software companies have gone in heavily for various quality certifications, such as ISO 9001:2000.

The adoption of these quality models has had implications not only for India's competitiveness in the global market, but more so for work itself and systems of control over the work process. The main feature of CMM type quality models is that they are extremely 'process oriented'. Quality

processes are supposed to introduce discipline into the production of software in order to reduce the many errors ('bugs') that are caused by the individualistic nature of programming. These quality models prescribe rationalized and systematic processes for the organisation of work flows at every stage of the software cycle as well as for management practices; the setting of specific productivity goals for each worker and team on a daily and weekly basis; and detailed monitoring, measuring, reporting, and evaluation of work completed.

Everyone is obsessed with process, rather than the ethos behind the process. According to some scholars, software quality processes have introduced new forms of direct or 'panoptical control' and surveillance into the workplace, in apparent contradiction to the official rhetoric of worker initiative and autonomy (Prasad 1998). These systems of surveillance go much beyond those found in traditional bureaucratic systems or in Taylorism, in their ability to instill discipline and consolidate control over the work process. The effectiveness of these techniques of control is further enhanced by the fact that surveillance now takes place primarily through electronic means, what Zuboff (1986) called the 'information panopticon'.

The development of this factory-like software production system has provoked a fresh debate on the 'deskilling', or 'invisible deskilling', of software engineers (Aneesh 2001b; Prasad 1998). The fact that engineers are often required merely to put together readymade modules and produce code according to fixed norms reduces the scope for creativity or even much thought. This deskilling is exacerbated in the case of the Indian outsourcing industry because it tends to concentrate on projects at the 'low end' of the software services spectrum, such as maintenance and testing -- tasks that are even more routine and monotonous than modular coding.

The resulting blend of indirect and direct management techniques, a ‘hybrid’ system of control, is perhaps more insidious than either management system on its own. For instance, CMM-based surveillance systems work in tandem with team based organisation, which brings moral pressure to bear on team members who are identified as lagging behind. Given that software project cycles and deadlines are quite inflexible, this system, which in theory grants autonomy to individual employees and teams to plan and carry out their work as they like, is in fact coercive because employees are given little choice but to acquiesce to pressure from team leaders and colleagues. While most software companies stress the non-hierarchical and informal nature of their work culture and claim that employees are given a lot of freedom to decide how to complete their work and how to allocate their time, software development projects are heavily time-bound, involve the close coordination of a number of people and activities across different locations, and are governed by strict deadlines. The demand for on-time delivery of quality software based on ‘process’, and the fact that the work process is closely planned, monitored, and evaluated, appears to conflict with the official work culture based on openness, individual initiative, and informality. While on the surface the social atmosphere may encourage informal interactions and camaraderie between managers and engineers and among team members, or even allow individuals some amount of flexibility, for instance in office timings, the increasing process-orientation of work in software companies is making the production process more akin to the Taylorist factory floor model.

2.8 People as ‘resources’ ‘IT companies are factories – people go in and code goes out’

Control over ‘resources’ and control over time are key issues in the management of large outsourced projects. All medium and large companies have developed complex systems to manage these functions, based on CMM

processes or on other such models. These include the ‘resource management system’ (‘resource’ referring to human resources), ‘time management system’, quality control, and so on – all of which consist of computerised monitoring and control systems that enable management to make optimal use of their ‘resources’ and to manage the work flow effectively.

Under this method of control of the time management system (TMS), each engineer has to log the time spent on each activity each day –such as coding, attending meetings, etc –on a timesheet in the TMS tool (a computer programme). Time Management System in UST Global was formerly an inhouse application called ‘e-time’. Now they have subscribed to the popular IT governance web based application ‘Innotas’. Entries are validated by the project manager. This account is used for billing the client as well as for several internal purposes. For instance, ‘effort variance’ is calculated from the timesheet, which is the variation between actual time taken for work and the time that was estimated in the project bid. If there is a time overrun, managers and quality control executives have to analyse the reasons. These data and the subsequent analysis are valuable to the company because it becomes the basis for making future estimates when bidding for projects.

The time management system is linked to a larger quality control system that is mandated by the CMM model. The process orientations are introduced by such quality certifications. The ‘process’ is defined as a “systematic way of doing things”. For every task there is an estimated time frame, on the basis of which work is assigned; and after the team member executes the assigned tasks s/he reports the time taken. The data collected are collated in status reports, which are reviewed by the quality department and used in future project planning, assignment of work and resources, and so on. In order to arrive at standards against which to measure productivity, the size and

complexity of a software project is measured by various ‘metrics’ such as number of lines of code or ‘function points’, and on that basis the time that is needed to complete the project is estimated.

Similarly, to measure quality in testing, an estimate of how many test cases can be completed in a given amount of time is made, work is assigned accordingly, and then ‘effort variance’ is computed against this standard. The TMS tool is also used to compute productivity, which is defined as percentage utilisation of resources. Each engineer is supposed to spend eight hours per day on a project, and the TMS tool reveals whether these ‘resources’ are being overworked or under-utilised. In the latter case, they may be assigned to other projects for some hours per week, to ensure that they are ‘fully utilised’. Productivity is calculated by dividing actual hours worked by the standard eight hours, and is measured for each ‘resource’ as well as for each team and project. Apart from its significance for the management of projects, this quality data most crucially feeds into the appraisal process, in which the key ‘metric’ for individuals is productivity.

Needless to say, there are inevitable gaps between the data collected and the actual hours worked. The quality assurance executive assigned to a particular project has to hold several meetings with the managers and engineers to investigate why they were not filling up their timesheets correctly. The quality assurance executives many a times finds that everyone was recording eight hours per day, whereas the engineers were actually working much longer hours. The reason for this was either that engineers found it too troublesome to keep track of their time correctly (and so put in eight hours automatically), or they thought that if they fill in the actual hours of work (10-12 or more) their productivity measures would go down. Struggles over timesheets and ‘metrics’ such as productivity are one

area in which one might identify subtle forms of resistance on the part of employees.

It is based on the idea that all aspects of work can be quantified and measured, and that by doing so can be better controlled. The principle of 'What you cannot measure, you cannot manage' is followed. For instance, there are a number of parameters that are used to measure 'quality', all of which are quantifiable, such as effort variance, schedule variance, size variance, and so on. These procedures form a highly rationalised system for setting and meeting targets. Quantitative measures are always better than qualitative, because the objectives are set in numbers. There are various benchmarks fixed by the company for itself, as well as industry benchmarks, and these are used to measure the company's performance against industry standards, yielding an index of 'corporate quality'. The effort, time, and productivity of software engineers are measured, monitored, and controlled through these complex quality management systems, while the engineers or 'resources' are controlled through 'resource management' systems.

In medium and large services companies with large workforces, this is a key function, because the ability to deploy the right number of engineers on projects as needed is crucial to completing projects on time. Resource management (RM) systems are designed to allocate 'resources' among different projects and tasks so as to make optimal use of their time and skills. They depend on the systems of monitoring and quantification of time and productivity. A central feature of resource management systems is the 'bench', which refers to employees who are not currently on projects and hence are not 'billable', but are available for assignment. When an employee is released from an assignment he goes on the 'bench' until he gets the next assignment. RM departments keep track of who is available and help managers to assign engineers depending on their skill

sets and the requirements of various projects. While ‘sitting on the bench’, employees may be sent for training or given other non-billable work. The RM department has an employee database on which resumes are maintained and updated. In order to keep project managers informed about the availability of resources, a ‘bench report’ is published periodically. The RM system also controls who is sent onsite – hence the RM manager is a key person for software engineers to cultivate. Most companies maintain a ‘bench’ consisting of anywhere from 5 to 20 per cent of the workforce, although official figures on the size of the bench are hard to get. Some of the large companies are reluctant to admit that they have a bench at all, because maintaining ‘non-billable’ workers is expensive and this reflects on their profitability. Bench is referred as ‘intermediate to allocation’. But maintaining a large bench is essential for service companies, which need to have resources available to put on projects as soon as a contract is signed, since recruitment and training take a long time. This analysis of resource management systems in software companies suggests that software engineers are viewed mainly as ‘resources’ to be marshalled, retained, downsized, or deployed as required.

2.9 Organisational structure and people management

To counter the high levels of attrition and stress, IT companies have put in place a variety of employee-friendly policies. The physical environment in most software companies is equal to that found in any American or European office, salaries are much higher than in other sectors, and employees are offered a variety of attractive incentives, from employee stock options to subsidised housing loans. A range of HR (Human Resources) practices designed to create employee loyalty include social events such as team picnics and dinners in five-star hotels, subsidised gym memberships, recreational facilities in the office, yoga and aerobics classes, and so on. HR departments

go to great lengths to “keep the atmosphere happy”. ‘Employee-friendly’ HR policies are part of a larger strategy of creating a strong corporate culture, and are aimed at attracting, retaining and motivating employees. Some companies have created such a strong ‘brand value’ in terms of employee relations that they are considered to be the most desirable employers, even if they offer lower salaries than other companies. These ‘soft’ HR policies provide some balance to the systems of direct control.

Some software companies have acquired, or are attempting to get, PCMM certification, which is the equivalent to CMM in the area of people management. PCMM certification presumably means that they are following very enlightened HR policies and practices. The number of companies in India that have opted for PCMM is much smaller than those who are CMM Level 5 certified, because human resource management, while important, is not as crucial from the point of view of marketing. Moreover, like CMM processes, PCMM involves excessive procedures and paperwork that many companies would like to avoid. Nonetheless, some aspects of the PCMM model for people management have been adopted by several companies, because it is considered to be a systematic human resource system that also enhances the brand value of the company, for marketing both to customers and to potential employees.

PCMM is based on a ‘competency-based’ framework, a standard approach in human resource management, and covers 22 Key Performance Areas (KPA). Like CMM, PCMM has five levels: PCMM Levels 2 and 3 focus on HR policies and practices, while Levels 4 and 5 are concerned more with organisational issues. To achieve each level, increasingly comprehensive and exacting practices and systems must be put in place. For instance, in the area of training, Level 2 involves basic training programmes, while at higher

levels it would mandate ‘enhancing competencies’, mentoring of employees, and so on. Level 4 is concerned with measuring people functions in order to assess improvement, while at Level 5 the company is supposed to show continuous improvement. While general guidelines are provided by the PCMM model, the specific parameters for each company’s evaluation are worked out keeping in mind the local business and work environment. So, rather than importing fixed parameters from the U.S., they are decided by the company, but once the standard is set it is expected to be maintained and measured according to a certain system. Even requirements such as providing a comfortable working environment are pegged to local conditions, and the metric to assess this is employee satisfaction rather than an absolute standard. This means that two PCMM Level 5 companies could be very different in terms of their labour standards.

While software companies clearly go to great lengths to evolve and implement attractive HR policies, given the high attrition rates it is not clear to what extent these policies are effective in retaining employees. While many of them are appreciated by employees, research suggests that they are superficial ‘band aid’ solutions to what are deeper sources of discontent caused, in many cases, by HR policies themselves. In fact, while HR managers often complain about the demanding and fickle character of software engineers, engineers also voice complaints about HR departments, which they see as autocratic, distant, and unable or unwilling to address their real concerns.

2.10 HR Practices in Indian IT Companies

2.10.1 Employee Sourcing Practices

2.10.1.1 The recruitment process

Human resources are considered to be the key to the software business, and software companies invest much time and money in recruitment, training,

and retention of their human resources, especially during boom periods between the dotcom burst in 2001 to the economic slowdown in 2008. The large Indian IT services companies in particular, have evolved sophisticated mechanisms to identify and recruit personnel with the right mix of technical, communication and social skills.

Apart from direct recruitment an entire ‘ancillary industry’ of employment consultants or ‘headhunters’ has emerged to cater to the manpower needs of the IT industry. IT companies hire both fresh graduates as well as experienced personnel (‘lateral hires’). The several sources for recruitment these companies adopt include campus placements, advertising in newspapers and on employment websites, e-recruitments (recruitment through internet), walk-in interviews, through employment consultants, and employee referrals. With the rapid ramp-up in staff strength in most companies over the last couple years, the majority (55-75 per cent) of recruitments in the large companies have been entry level, while the balance 25-45 per cent are experienced workers hired from other companies. Of the entry-level recruits, about 35-40 per cent are sourced through campus recruitment while the balance come through other channels, including temporary staffing. Companies vary in their preference for ‘freshers’ or experienced people: while the large services companies hire many fresh graduates, some MNCs and software products companies prefer only those with three or more years of experience.

Because of the perceived shortage of skilled software engineers in the last few years before the economic slow down, and the sharp competition among companies to recruit the best talent, recruitment has become a key HR function. HR managers refer to recruitment as a ‘marketing’ function, since all the companies are competing for the same small pool of qualified engineers.

Recruitment officers have to “sell themselves” to the techies rather than vice versa, and so they have to understand what candidates are looking for in terms of work or company culture, and accordingly pitch their ‘sale’. Corporate branding is aimed not only at attracting customers but also employees. That such branding can be effective is indicated by the fact that some techies prefer to join a company with a good ‘brand image’ even though they might get a better salary elsewhere.

While the bulk of hires come through campus recruitment, employee referral schemes are a particularly favoured method of recruitment. This is also known as ‘bring in a friend scheme’/ buddy scheme. Companies advertise positions on their intranets and employees may refer their friends; if the recruitment is successful the referring employee receives a substantial bonus. This is considered to be a good source of recruits because the employee would have already apprised the candidate about the company and the job requirements, and there would likely be a good ‘fit’ between the two. Many companies get about 25-30 per cent of their new hires through employee referrals. Employee referral schemes draw on existing networks of software professionals that extend across companies and locations, and which are invoked more generally in the job market as sources of information about employment opportunities. The operation of these social networks in the recruitment process assumes significance in relation to the discussion of processes of exclusion and inclusion in the industry in the following section. As in other fields of social life, social networks not only facilitate cooperation and exchange of information, they may also produce closure and exclusivity and strengthen the monopoly of members over social and economic resources. To the extent that software engineers employed in the larger companies maintain social networks primarily with former classmates and current and

former colleagues), and information about job opportunities flows primarily through these networks, they may create barriers to new entrants. Professional social networks website like LinkedIn is very popular among Indian IT companies. On the other hand, with the rapid growth of the industry and expansion of the workforce, opportunities are not scarce and salaries are high, so one would not expect to find monopolistic tendencies within the software profession. Rehiring exited employees is also a popular source of recruitment among Indian software companies.

2.10.1.2 Campus placements

Although software companies obtain their human resources through several avenues, the major source is campus recruitment, and it is in this process that filtering mechanisms are most visible. Because of the wide range among engineering institutions and graduates in terms of quality, all the major IT companies have developed their own rankings of engineering colleges, based on external evaluations such as that done by All India Council for Technical Education (AICTE) as well as their own past experiences with hires from those colleges. The rankings of the top fifty colleges are more or less the same for all the companies, which mean that they are competing for a limited pool of well-qualified engineering graduates. Campuses may be graded into three tiers or on a points/grade scale: 'Tier One' or 'A+' institutions include the IITs, IIMs, the Indian Institute of Science, BITS Pilani, and a few others. Tier Two or 'A' level include the Regional Engineering Colleges (RECs) [now the National Institute of Technologies (NITs)], and the top state campuses. The good private institutes are rated Tier Two or B.

The large Indian IT companies and the MNCs are considered to be the best employers and so are able to recruit from the best engineering institutions. The large services companies usually visit the top 50-60 campuses each year;

the MNCs and the medium-sized Indian products or services companies may visit about ten select campuses while smaller companies usually go to the same few colleges each year. MNCs prefer to recruit from the 'Tier I' institutions such as the IITs, but also must go beyond these in order to fill their requirements. The services companies, on the other hand, focus more on Tier II and III institutions, although they visit all the major campuses. With the large and medium Indian companies and MNCs attracting the best students from the better colleges, smaller firms are forced to hire less qualified candidates, such as science graduates with MCA degrees. The exception to this trend is the small high-end startup companies, who are able to attract well-qualified and experienced people because of the nature of the work that they offer. Non-engineering graduates face strong entry barriers to big software firms (Rothboeck, et.al. 2001). Because IT companies are battling for the same pool of candidates, the colleges have instituted complex placement systems in which companies are invited to come in one after the other to recruit students. The company that comes first is able to pick up the best students, and it is usually the big companies, such as TCS, Infosys and Wipro, which get the first slots. The campus placement process is for third year engineering students, which means that they receive offer letters that become valid only after they complete their graduation, in another year. The large companies project their requirements for the coming year and attempt to recruit their projected requirements from campuses; if there is a shortfall, they make up the balance through other methods such as nation-wide walk-in interviews. This system of advance recruitment has created problems in the downturn of 2001-02 and 2008-09 when several companies did not honour the offer letters issued earlier, and fresh graduates were neither able to take up other jobs nor join the companies that had recruited them. By recruiting third-year engineering students, software companies are playing something of a 'futures' game, in which they are betting on their estimated future manpower requirements; if their projections are

wrong they may not actually take on those who had been recruited a year earlier. With the intense demand for software engineers, companies face the reverse problem of recruits not joining when they finish their degrees. There is a large gap between the number who are given offer letters and the number that actually join.

From the students' point of view, the campus recruitment system is a mixed blessing. While it provides a guaranteed job after graduation for those selected, it reduces their choice because once a student has been given an offer, s/he is not allowed to attend any other company's interview. Because the more influential companies are invited to come in first, students may be forced to accept offers from companies that are not their first choice, rather than refuse an offer and take a chance that they will be selected by another company. However, some colleges have what is called the 'Dream Option', in which recruited students are allowed to pick one other company to apply for a placement. This is done in order to accommodate companies that have later slots in the placement process. Most software companies in India follow similar campus recruitment procedures.

2.10.1.3 Filtering mechanisms in the recruitment process

First, only those students with a certain cut-off percentage throughout their course (ranging from 60 to 70 per cent aggregate marks in most cases) are allowed to apply. These students are given a written test, which may be purely technical and based on the engineering syllabus, or may be a test of aptitude and reasoning ability. The software majors usually test reasoning/ logical, analytical and problem-solving skills, and sometimes English and Mathematics, but not computer skills. Those who pass the test are then asked to participate in a group discussion in order to assess their communication skills, personality, and spontaneous thinking abilities. Clearly, it is not knowledge of English per se that is problematic, but accent (which can make the employee less comprehensible to foreign clients), style of communication,

and ease of social interaction, especially with superiors and onsite. The lack of wider ‘exposure’ and knowledge of the world among those from “rural engineering colleges, who cannot think beyond what they are taught” is another impediment for being short listed. Fuller and Narasimhan (2006) make this point in their discussion of the discourse about ‘exposure’ among IT professionals in Chennai who come from smaller towns. The value that is placed on good communication skills in the wider sense creates another kind of filtering process within companies. Only certain kind of personnel talk to clients especially those who have good command on English and good communication skills. The candidates who are short-listed after the group discussion are then individually interviewed.

2.10.1.4 Selection Interviews

There are usually two types of interview, the technical interview and the HR interview. The emphasis in the interview process depends on the kind of job for which the company is recruiting: for a job that involves more customer interface they look for candidates with good communication skills, while for pure development work high marks and technical ability are given more value. But most companies stress that they are looking for ability to learn rather than knowledge of any particular technology or specific skills: their software engineers should be able to be trained easily and to pick up new technologies on their own. As noted above, the large software services companies hire engineering graduates from any stream, or MCAs with the right aptitude, and then put them through a thorough entry-level training course. At the entry level, the employees do not even need to have any knowledge of computers. But even the MNCs stress potential to learn rather than prior training, although some of them will hire only computer science graduates or those with post-graduate degrees in the relevant vertical (such as telecom).

Apart from ability to learn and technical aptitude, software companies place great emphasis on attitudes and values, personality, and soft skills. The HR interview round is designed to assess these aspects, including the candidate's career aspirations, family background, and personality, and to determine whether s/he will fit into the company's culture and (in some cases) into the group or team for which s/he is recruited. They also look for candidates with the right attitude for being a 'good team player'. HR officers use innovative methods to test these aspects of the candidate's personality and to ensure that s/he is a good 'fit' in the company and would not be 'disruptive' in the team. For instance, team skills and levels of individualism are gauged by posing mock situations, or by asking about study habits (alone or in a group?) and extracurricular activities (group or individual sports or activities?).

In smaller companies, the project manager may also be asked to interview the candidate to ensure that s/he fits into the team. MNCs in particular look for 'cultural fit' with the company, i.e., in terms of values and attitudes. HR managers look for employees who are not only technically sound, but are also 'confident', good in communication, and flexible: Candidates should exhibit a great deal of flexibility, willingness to travel to any location, anytime and be open about long working hours. Moreover, companies look for engineers with the right 'attitude', by which they mean flexibility and malleability.

The interview process is designed to filter out people with "undesirable attributes". For instance, the candidate is asked whether he or she is willing to work on any project at any location. The interviewers tell them that they would be re-skilled based on the requirements. Only if they are agreeable to this does the interview proceed further. Later if these candidates bring up the issue, HR refers to this and tells them how these issues were already discussed during the

interview process. The induction program in the companies further orients people about these values.

This highly desirable attribute is flexibility. The second major 'soft skill' that is assessed during the HR interview is communication skills. Because most software jobs, especially in the services companies, are 'client-facing', good oral communication skills are considered to be essential, and a candidate may be rejected purely on the basis of poor communication skills. The first requirement is fluency in English: this is needed not only to be able to deal with foreign customers effectively, but also because the IT workforce is diverse and the only available 'link language' is English; many companies consider use of vernacular languages in the workplace to be inappropriate. But 'communication skills' also includes the ability to converse and interact easily in different social and cultural situations.

A common refrain among HR managers is that Indian software engineers are very good technically but are unable to communicate well with clients. The ability not only to understand and communicate with clients about the project, but also to make small talk and socialise with people from different backgrounds, are considered necessary skills for 'client-facing' positions in the outsourcing industry. Such skills are critical not only for marketing people but also for software engineers, who need to interact with clients onsite and during conference calls and teleconferences and be able to understand and solve their problems. The candidate's 'ability to mingle' is assessed during the HR interview, as well as his or her general appearance and demeanour. The close attention that is paid to this stage of the recruitment process suggests that as much importance is given to the personality, communication skills, and social attributes of IT professionals as to their aptitude for computer work, educational background, or technical skills.

2.10.1.5 Lateral Hires

One avenue through which those from ordinary engineering colleges or with lower marks may gain entry into the large companies is by finding employment first in smaller companies or taking up temporary contract jobs. Once a software engineer has acquired some work experience, it may be possible for him or her to land a job in the larger companies, regardless of his or her educational background. One manager claimed that the academic record is not taken into consideration for those with work experience.

HR managers emphasise that gender, regional, caste, community identity are irrelevant in the recruitment process, that the sole criterion is 'merit', and that the profile of the workforce will therefore reflect the diversity of the country. Although the IT industry maintains that it must be free to hire the 'best' or most meritorious people in order to maintain its competitive edge and continue to provide increasing employment opportunities, recent public statements by industry leaders suggest that they are sensitive about this issue and wish to be seen as taking steps to increase the diversity and inclusiveness of their workforces.

Regardless of the avenue of recruitment, the screening processes are similar to the earlier mentioned process, except that experienced engineers usually do not have to take the written tests that are administered to fresh graduates. Because the large software services companies hire large numbers (15,000-20,000 or more) each year, and have to process a large number of applications, they have streamlined extensive processes for recruitment. For instance, these companies advertise positions periodically, screen the resumes received, and then invite applicants to come for a test or walk-in interview that is held in a number of centres across the country on a single day.

2.10.1.6 Temporary and contract workers

There are a large number of Temp staffing companies or HR Solutions companies the erstwhile manpower consultants in the major centres of the IT industry, ranging from large professional firms with many clients and extensive employee databases, to small operations that specialise in certain types of clients or domains. Some of the leading ones in India include Team Lease, Kelly Services and People Strong. This ancillary industry developed during the period when software services outsourcing was organised primarily through body shopping. Although the body shopping phenomenon has reduced considerably with the professionalisation of software services outsourcing through the large and medium size companies, it still occurs, but more now within the local market. Almost all of the large software companies, Indian as well as MNCs, engage personnel on contract basis through manpower consultants – a system known as ‘temporary staffing’ or ‘deputation services’.

Most of the large services companies have as much as 10 to 20 per cent of their workforce on temporary contract at any given time, but even the MNCs hire contract workers, especially for low-end jobs. This system enables companies to respond quickly to shifts in demand, deploying people on projects or laying them off as needed, and it is cheaper than maintaining a large proportion of permanent employees ‘on the bench’. Temporary workers are recruited mainly for short term projects (of six to eight months or so), to work on low-end web design, customisation of applications, and so on.

Temporary contract workers are considered to be something like second class citizens in the companies where they work: they are looked down upon by other employees and also do not feel any sense of loyalty or belonging to the

company. ‘Temps’ are generally those who are not able to get regular employment in the companies of their choice, and may be less qualified, with Bachelors in Computer Science degrees and the like. Their pay and other perks are also much less than regular employees, because the consultant takes a large chunk of what is paid to them. But many are willing to work as temps in the large companies in the hope of eventually getting absorbed as regular employees. This type of contract work is also highly insecure: although consultants maintain large databases of IT workers, the individual worker is paid only for the period of the contract and so has no income during the period when he or she is out of work (unlike those who are body shopped to companies abroad and are given at least a living allowance when they are between jobs).

In addition to the contractors or temps who are on deputation from consultants, companies also hire temporary workers directly on one-year contracts. During this contract period the employee is liable to be terminated at any time, even on one day’s notice, hence they have no job security. Also, one mode of recruitment is to hire through consultants on contract basis and then absorb those who are found to be competent. These systems of recruitment and temporary staffing add to the flexibility of the IT labour market: while from the industry point of view, this enhances their own flexibility in the deployment of human resources and hence their profitability, from the employee point of view it is of course a very insecure form of employment. It is difficult to assess the number of temporary IT workers in the industry as a whole, but they may constitute 10 to 20 per cent of the total workforce, if not more.

2.10.1.7 Labour market intermediaries

Apart from providing temporary contract workers to companies, labour market intermediaries also enhance the fluidity of the job market (and possibly

contribute to the high attrition rate) through the ways in which they source staff. Consultants gather information about the kinds of work being done in different companies and even attempt to get HR data from them, and then target certain employees for recruitment, based on the requirements of their clients. Software engineers, especially those in the large companies and MNCs, regularly receive calls from headhunters with enquiries and offers of jobs. While the industry has from time to time tried to enforce anti-poaching agreements, these have not been very successful, nor are they ethical or legal. The medium-size companies would not poach employees directly from its competitors, but hires executive search consultants /headhunters to recruit people from companies that have the kind of employees it needs.

2.11 Human Resource Development in Software Firms

2.11.1 Differential Training

Through the recruitment process, candidates with a certain blend of technical, social, and cultural skills are selected by IT companies, but after they join the workforce they are further moulded through intensive technical as well as ‘soft skills’ training. The latter is considered to be especially important because software services work requires frequent interaction with foreign customers, while Indian software professionals are considered to be poor in communication and social skills. Through such training programmes, Indian techies are transformed into effective ‘global professionals’ who are able to interact with customers and colleagues abroad in socially appropriate ways.

Based on the content, training imparted by the companies can be broadly divided into two categories-technical and non-technical. Technical training involves imparting technical knowledge that is directly related to software

work. Non-technical training involves imparting knowledge that is related more to the human aspects of the work. Technical training can further be divided into two categories: (i) functional and (ii) specialized. Fundamental training is given to new recruits, and the main objective is to introduce software work to a person who is unfamiliar with it. It involves the fundamentals required to perform the work, and the period of training ranges from 30 to 90 days. Anybody who enters the industry will be treated as an equal after executing a couple of projects. After a new trainee finishes his courses (training) here, he is on a level playing field (Ilavarsan, 2008).

The nature of the training is driven by the market, i.e. organizations prepare their worker according to the needs of the contracted projects. Most of the trainings are need based-when a firm takes on a project and does not have the competence to handle it; workers are trained in the relevant skills. There is no difference in the nature of the training imparted to various categories of workers, except for newly recruited workers who are given fundamental training. In this training, employees are not differentiated in terms of their subjects or degrees. Employees have no control over the nature of training they receive; it is largely driven by clients (Ilavarsan, 2008) .

Continuous training sessions are organized for all level of workers. Even the higher level employees like Project leaders need to update their skills especially in newer areas. They all attend the training programme together for three weeks. Often 'low-level' workers are seen giving training to 'higher-level' workers. They give presentations to senior people about a new technology or technique that they have used for the first time in the organization. These are known as knowledge sharing sessions and seem to be held in all software companies (Ilavarsan, 2008).

Apart from initiatives taken by companies in training employees, there is constant pressure on workers to independently update their skills. In many cases, workers themselves take up training programmes. For example, during the bench period an employee is paid for doing nothing. If the period is long and uncertain, one cannot sit idle. S/he needs to pick up something and try to learn in that period. It is always better to learn something (Ilavarsan, 2008).

Apart from formal training programmes, in some cases on-the-job training also takes place. On-job training is given in two ways: by inducting the new worker into an existing project or by assigning an internal project. When a worker is inducted into an existing project, s/he is allotted a small piece of work and is supported by the other team members. s/he learns the work by practical experience. In internal project cases, workers are allotted individual projects and expected to arrive at solutions with the help of mentor, he learns through mentoring and through his own work (Ilavarsan, 2008).

In addition to the technical training, workers are trained in the human aspects of their work. These programmes focus on corporate etiquette, presentation skill, team building, cross-cultural manners and effective email communication techniques. Training is given either by the in-house training department or by external trainers contracted by the firms. The in-house training is given by a specialized department or by other employees who have free time (Ilavarsan, 2008).

2.11.2 Career Opportunities for Software Execution Workers

IT has become the career option of choice for many young educated Indians, for whom it offers salaries unknown in other sectors as well as an opportunity to live and work outside of India. Software engineers in IT-related

occupations can be said to constitute a new kind of workforce: they are highly educated, well-paid, mobile, and closely linked into the global services economy, whether working in India or abroad. Moreover, work in this industry is distinctive in that it is not only catering to the global market, but is often performed ‘virtually’, giving rise to new kinds of workplaces, work cultures, and employment issues.

Low-level software workers have limited career growth opportunities and rarely do they become managers or technical specialists. The lack of career opportunities deprives them of the chance to learn and upgrade their skills and they experience only horizontal movement. Low-and middle-level workers get only ‘virtual’ promotions. They may get small increase in pay and their titles may also change, but the nature of work remains the same.

In the Indian case, it is observed that career opportunities are not restricted to any particular segment of the workforce. Most Indian software workers follow a similar path. i.e. towards the managerial side. Employees are found doing testing or coding for the last fifteen years. They have a proper ladder in that line itself (technical). Most organizations are more projects based (i.e. engaged in software services rather than product development).

2.12 Career Advancements / Promotions

Indian software industry works predominantly on the HR augmentation mode. It needs many managers to coordinate projects between the Indian organizations and their parent firms or clients. It was found that in the Indian software companies, the process of promotion is almost time-bound. All software engineers are promoted to the next level after gaining a certain number of years of experience in their current level. Performance appraisal is periodical everywhere. It needs 18 -24 months to shift to another grade for a

fresher. Performance appraisal is quicker among the software firms. For exceptionally good workers, promotions are announced in the middle of the year, but they will get a hike in pay only in the next financial year. Another study (Arora et. al 2001) also notes that Indian software workers are promoted to managerial positions based on seniority in the job rather than proven managerial capabilities.

2.12.1 Performance appraisal and promotions

Medium and large software companies have hierarchical structures of some kind, and that career mobility involves movement up through the various levels or ‘bands’, which is accompanied by enhancement in compensation and responsibilities. This process is controlled through a ‘performance management system’, which is a key component of the ‘people management’ (HR) function in every IT company. Promotions and increments are based on individual performance ratings, and for this reason the performance appraisals that are carried out every six months or one year are significant rituals for software engineers and managers. Appraisals are used to review pay and terms and conditions of contracts, and this in turn is made possible by the fact that contracts are individualised (Barrett, 2001). The fact that promotions are ‘performance-based’ and do not take place in a fixed, time-bound manner is considered to be one of the distinguishing features of the IT work culture, in contrast to ‘old economy’ companies that have elaborate systems of grades and clear promotional paths based on years of experience.

The specifics of performance management vary from company to company, but usually the appraisal process follows the same broad outlines. In most companies it takes the form of ‘self-appraisal’, in which the employee is required to report on his or her own performance during the relevant period,

measured against goals that had been set during the previous appraisal cycle. This self-appraisal is reviewed by the immediate manager(s) and sometimes by HR personnel as well, and together (in theory) they arrive at a performance rating. This may be a number or letter grade on a scale of five points or more, or simply terms such as 'excellent', 'good', 'average' and 'poor'. In some cases, the appraisal is done by the manager, who then informs the employee of his or her rating,

In many companies there is a '360 degree' feedback system, in which employees rate those above them as well as those below. Customer evaluations of performance may also be taken into consideration. Contemporary evaluation methods are 'competency-based': competencies are defined in terms of 'Key Result Areas' (KRAs) and 'Key Performance Areas' (KPAs), which in turn are determined based on the company's goals. Each employee is given specific targets to be met for each KRA and KPA that is relevant to his or her position.

The system of performance rating on a curve (normalization) that is followed by several companies is an issue among employees. Rating on a curve means that some individuals in a team have to get poor ratings, despite their actual performance: of ten team members performing at roughly equivalent levels, two or three will fall at the bottom and hence will not get an increment.

Performance appraisal is used to identify poor performers as well as good ones. Some companies have a policy of 'churning out' the bottom 5 or 10 per cent of employees automatically each year. This is regarded by employees as particularly unfair when grading is done on a curve. While the system of performance-linked promotions and increments is supposed to enhance performance and productivity by fostering competition among

employees, several informants spoke about this competitiveness in a negative rather than a positive sense. For instance, they are driven to work longer and harder in order to keep up with, or surpass, their colleagues in terms of salary and grade. There is also competition for onsite assignments, not only because they are lucrative and enhance one's curriculum vitae ie. c.v. because they are seen as a sign of recognition. Those who have been on overseas assignments are considered to be 'in focus' and in line for promotion.

Competition is also fostered by the desire to be 'visible' to management. 'Visibility' was mentioned by several respondents as a key factor in performance appraisals and promotions ("you need to market yourself"). Lack of visibility ("it is difficult to get noticed") was cited as one of the drawbacks of working in a large company, where "crossing the first step takes four years": this is one reason why employees of the large service companies look for jobs in MNCs after gaining a few years of experience.

The competitiveness that is encouraged by this system reinforces the process of individualisation and may work against the ideology of teamwork, cooperation, and sociability in the workplace. Excessive competition due to performance-linked incentives also leads to over-work and stress. In some companies employees have the option of taking up more work and getting higher compensation through these incentives, which leads to long working hours and high stress levels. Moreover, the performance appraisal system appears to produce a culture in which desire for recognition and feedback from superiors conflicts with the requirement that engineers be 'autonomous' and self-motivating.

The flip side of the perceived need of engineers to gain visibility is the statement that was made by many managers that software engineers continually "seek recognition". Promotions take place more quickly in the software

industry than in most ‘old economy’ companies: a junior software engineer may be promoted to senior software engineer within a year or two, and then to a team lead or tech lead position within another two to three years. The survey data by Upadhyaya and Vasavai (2006) reflect this mobility: 60 per cent of respondents had been in their current positions for two years or less, 20 per cent for two to three years, and only 20 per cent had been in the same position for three years or more. The average was 1.62 years in the current position. 68 per cent of respondents had received promotions, and of the 28 per cent who had not yet received promotions, three-fourths had been working for two years or less. Because of this rapid pace of promotion, software engineers may reach management positions at a relatively young age.

2.13 Other HR policies and practices

2.13.1 Employment Contracts

Another issue that concerns employees is the contracts that they have to sign. Apart from the usual three months’ notice period (which can be waived by forgoing the equivalent in salary), the ‘service agreements’ of most companies contain a monetary clause that is included to recover the cost of training in case the employee quits within one year (or in some companies, two to three years). In effect these are like bonds, which are illegal in India. Although it appears that such clauses are not usually enforced, they may exert moral pressure on employees to stay with the company for the stipulated period. Also, when employees are sent onsite they may be made to sign a bond or surety stipulating that they will not quit the company during that period or join the client company and that on completion of the assignment they will continue to work for the company in India for at least six months. If they break this contract they are liable to pay a hefty fine amounting to what they earned while at the client site, or up to three years’ salary. Some companies do

attempt to enforce these provisions, including the use of strong-arm tactics. The non-competition clause in employment contracts, which prevents the employee from joining a competitor when he or she leaves is not really enforceable; however it may act as a constraint on individual freedom.

2.13.2 Neutrality and women's reality

Proponents of the new economy and ICT-based development argue that the nature of employment in the new industries require different kinds of skills when compared with the old brick and mortar industrial economy, particularly 'soft skills', and that this favours the entry of women into the workforce. IT is regarded as being a new avenue of employment that is particularly woman-friendly, and because it is 'knowledge work' there is no scope for discrimination on the basis of gender. The flexibility of timings and work processes (including the possibility of home-based teleworking) are also supposed to encourage women to enter this sector. However, while there is a larger proportion of women working in IT compared to many other sectors, and the industry has opened up an avenue for the employment of female engineering graduates who might otherwise not have been able to find jobs in traditional industries, there are still several gender-related issues that need to be highlighted. However, while information technology-related professions appear to provide good opportunities for women, there are also processes of exclusion operating within the IT industry itself, despite its efforts to institute women-friendly policies. Although the proportion of women in the software industry has been growing steadily over time, and a limited number of women IT entrepreneurs and managers also have a presence, they are still under-represented, constituting about 24 per cent of the IT workforce, according to a 2004 NASSCOM survey. The major determinant of the adverse gender ratio, according to the industry, is the availability of female graduate engineers. HR managers maintain that the

proportion of women in the workforce reflects the proportion of women among qualified graduates, and argue that as more and more women are taking engineering degrees the gender ratio in the pool of potential IT hires is likely to increase. Basant and Rani (2004) have analysed the available data and argue that the trend of growth of women workers in this sector is “not very encouraging”. There is also evidence of gendering within the IT workforce. This is reflected in the fact that women tend to be over-represented in the lower level jobs such as programming and testing, and under-represented in higher level and managerial jobs such as architecture, consulting and project management. The ILO study found significant “clustering” of women professionals at the lower end of the job hierarchy – especially a higher concentration of men in high-end firms and more women in low-end and ITES firms -“leading to feminisation of certain service activities” (Rothboeck, et.al. 2001). Although one does find many women tech leads, architects, and even senior managers in the industry, the proportion of women steadily declines the higher up the ladder one goes (Rothboeck, et.al.2001). The skill profiles of a large proportion of women workers are not appropriate for high-end jobs, and social restrictions on women’s geographical mobility may reduce their participation, especially to onsite assignments (Basant and Rani 2004).

While these data do not suggest that there is deliberate gender discrimination in the IT industry or that the pattern of gendering is very severe (as is the case in many other sectors). Software companies universally claimed that their hiring and promotion practices are gender neutral, and that the low proportion of women simply reflects the proportion of women graduating from engineering colleges. Some companies have been trying to improve their gender ratios by formulating ‘woman-friendly’ policies, such as giving options for part-time work or working from home, provision of crèche, and so on.

Several have initiated special programmes or organisations aimed at mentoring women and addressing their specific issues. Despite these efforts, women still appear to face barriers in the software industry that tend to inhibit their participation and career advancement. There are several obstacles to career growth for women, most of which appear to be related to their domestic responsibilities, but which are also linked to the work culture of the software industry. First, due to social and family reasons, many women are unwilling or unable to put in as many hours as their male counterparts. The ILO survey by (Rothboeck et.al 2001) found that women work less hours than men. There are several reasons for this: unmarried women are less likely to be able to stay in the office till late night, unless there is a pressing need, because they may face objections from their parents or social disapproval. Women rarely take part in the kind of informal socialising at the workplace that induces young unmarried men to stay late in the office, and in fact their male colleagues might resent their presence in the office after hours. Also, women need to reach home safely (although companies usually arrange for drops in the night). Married women face additional constraints due to their domestic responsibilities (from which married men usually escape) that require them to leave office at a reasonable hour.

Because of these constraints, when there is work pressure or an urgent deadline to be met, women are often faulted by their male colleagues for being unavailable or not pulling their weight in the team. The perceived unwillingness of women to put in the required work in such a high pressure job produces resentment and a tendency to marginalize women. This also puts women at a disadvantage at the time of appraisal or assignment of work, because they are seen as being less dedicated. Men in all-male teams have been known to protest when there is talk of recruiting a female engineer,

which they believe would not only lower the performance rating of the team but would also spoil the working atmosphere of male camaraderie and informality (in which off-colour jokes, for instance, are permitted). In addition, the system of control through peer pressure within the team can be turned against women, who in any case are in a minority; putting subtle pressure on them when they do not come up to the expectations of other team members. For instance, the allotment of work within the team is done by the team leader through a process of negotiation with the engineers: women may be given less responsible tasks because they are perceived as unable or unwilling to handle more difficult or time consuming jobs. HR managers believe that women are likely to quit after they get married or have children. Although they deny that there is any discrimination, there are fewer women in the industry because women are not seen as a “long-term investment”, so recruiters prefer males.

Another impediment to career growth for women is the requirement for frequent travel abroad on short- or long-term assignments. While unmarried women usually accept onsite assignments eagerly and there are many women software engineers working abroad along with their male colleagues, married women prefer not to take up these assignments. An engineer cannot be forced by the company to go onsite, but it does affect one’s career growth to consistently refuse such assignments. These factors lead more women to opt more often for jobs in quality assurance, maintenance, or similar ‘low-end’ functions, because these jobs tend to have regular hours with little chance of being sent abroad. These jobs are usually paid less and offer fewer channels for growth, yet women often prefer them. This pattern of self-selection tends to push women towards the bottom of the ladder in terms of status and earning power, producing a pattern of gendering of work in the IT industry that replicates what is found in other sectors. Due to the same constraints, women engineers tend to stay in the same company

for longer periods than men – their mobility is usually constrained by the husband's career and other domestic issues.

Given that job-hopping is a primary means of career advancement in the IT industry, this pattern suggests that women are less upwardly mobility. Childbearing and childcare pose major problems for women in the IT industry. Most companies give three month's maternity leave with the option of an additional three months' unpaid leave, as required by law, and some offer women the option of returning to work after maternity leave on a part-time or consultancy basis, or may allow them to work from home, for a year or more. Some companies even allow women to take leave without pay for a year. However, such measures provide only temporary respite to the problem of juggling childrearing with work in a high-pressure job. Even though some companies provide crèches, most women do not avail of them but prefer to make their own arrangements for childcare at home or at a private crèche – often because of the long distances they have to travel to work. Finding an adequate support system for children is a major issue: apart from long working hours, many workers spend at least two hours commuting between home and office, which means leaving children under the care of relatives or in crèches for ten to twelve hours a day. Presumably, if there is a perception that a woman has too many home responsibilities, this may weigh against her. Interruptions in women's careers due to childbearing have particularly adverse effects on their growth, given the rapid changes in technology and the need to keep abreast of new developments. Women often find it difficult to make up for the loss of experience and learning during their maternity leave. For these reasons, many women leave their jobs when they have children.

Yet another factor that affects women's careers is the husband's career. According to HR managers, the main reason that men leave their jobs is

because they have better offers, whereas women usually leave when they get married, when they have children, or because of the husband moving to another company or location. When both husband and wife work in the IT industry, the husband's job usually has priority in case of transfer or overseas assignment, which means that the wife must forego opportunities or else they have to live apart.

Apart from these issues related to women's family responsibilities, there are aspects of the IT work culture that tend to put obstacles in the way of their career growth. Workplaces reflect the norms and structures of the larger society, which cannot be entirely erased by enlightened management practices, training programmes, and the like.

Despite the fact that male and female engineers apparently work easily together in teams, social interaction in software companies, as in other workplaces, is still gendered. This tends to work against the interests of women, who are unable to fit into male-dominated social groups. For instance, an important feature of the work culture of the IT industry (or of any industry) is the operation of informal knowledge networks and social networks, and participating in these networks is a key factor in one's success. But most women are not a part of such networks, because they are built and strengthened largely after office hours over a beer or a cup of coffee. Women may be excluded from informal networks not only because of their own inability to participate, but also because male colleagues may be uncomfortable interacting with women on par with other men. Moreover, the new work culture emphasizes informal, non-hierarchical management systems based on networks and teams, which depend on the development of interpersonal relationships and 'team spirit'. But cross-gender interactions tend to be more formal, which affects the ability of women to develop these kinds of relationships.

These factors may also operate to hinder the effective functioning of women managers. Despite several obstacles to career mobility mentioned above, a number of women have moved into management positions in software companies and are leading teams, projects or groups consisting of both male and female engineers. While most men deny that they have difficulty reporting to a woman boss, gender does sometimes become an issue, as several women managers reported. By maintaining the official line of 'gender neutrality', managements fail to acknowledge that gender continues to be a primary determining factor in social relationships and so may become an obstacle to the smooth functioning of teams and managers, in the absence of countervailing policies.

Although some HR managers acknowledged these structural, social, and cultural constraints on women's careers in IT, the official policy of IT companies is 'gender neutrality'. By arguing that they do not distinguish between men and women in selection or promotions, they are able to throw responsibility for stagnation or failure back onto the individual employee. For instance, women may be faulted for lacking in ambition or 'toughness', or blamed for making personal choices in favour of family over career. By casting responsibility on to the individual or society at large, and by pointing to its enlightened and woman-friendly HR policies, the company is able to disclaim any responsibility for creating a more conducive working atmosphere for women.

2.14 Conclusion

Human Resource is life and blood of software companies as skillful talents are the source for competitive advantage in these industries. The dynamic nature of the software industry due to the innovative methods of work culture like virtual office and virtual migration shows the need for different

HR practices to this fastest growing industry. The characteristic of work is also very different from other sectors as there is high attrition rate, lack of Job satisfaction, Job hopping of the employees, flexibilization and individualization are common phenomenon in the industry which is major concern for the software companies. So companies are using different strategies like direct and indirect controls to manage the issues faced by the organization. Software companies are employing innovative human resource practices which are different from the brick and mortar companies to manage their human resources. The HR practices in Indian software companies like employee sourcing and human resource development initiatives are remarkably different from the manufacturing and other service sector companies. The researcher in this study tries to find out the answer for research question that the various innovative HR practices in software firms bring out human resource outcomes like job satisfaction, organisational commitment and organizational citizenship behavior among its employees.

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THEORETICAL FRAMEWORK

C a n t e n t s	3.1	Strategic Human Resource Management
	3.2	HR Strategies in IT / IT HR Strategies
	3.3	Rationale for Organisations to adopt some HRM Practices and reject others
	3.4	Concept of "Best Practice"
	3.5	Innovative Approaches to HRM in Workplaces
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	3.7	Human Resource Management Innovations (HRMI) Adoption–Contextual Elements
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	3.12	Indian Studies on HRM to Firm Performance
	3.13	Human Resource Practices and Human Resource Outcomes
	3.14	Innovative HR Practices and its relationship to HR Outcomes
	3.15	Demographic Variables and Perceived IHRP
	3.16	Conceptual Focus of the Study

Having looked into the major characteristics of work and employment in software industry in India and the human resource management practices in Indian software companies, this chapter reviews the literature relevant to the subject matter of this research. It traces the developments in strategic human resource management and innovative human resource management practices by reviewing pertinent conceptual and empirical studies conducted in India and abroad. It also examines the impact of innovative human resource management practices on employee outcomes. It identifies the gap in the literature and motivation for the present study. Culminating the conceptual focus and the hypotheses proposed to be tested in the case of this study.

An elaborate review of literature was undertaken to outline the theoretical framework as presented in the following paragraphs. The past few years have been the most threatening period for enterprises that use, manage, or deal in information technology (IT). The source of the tumult has been people i.e., the demand, supply, selection, recruitment, and, especially, retention of IT professionals worldwide (Guptill et al. 1999). Information technology and systems can contribute significantly to sustainable competitive advantage in the marketplace (Agarwal and Sambamurthy, 2002). The resulting challenge for many IT managers is to identify, recruit, and retain competent IT staff that has the necessary skills to manage and deliver the firm's IT needs. Since late 1996, IT professional compensation has soared, turnover has rocketed to 15% to 20% annually, job-hopping has become the norm and only eight out of ten IT positions get filled with qualified candidates (McNeely et al. 1994). These trends place both IT executives and human resources (HR) managers under intense pressure. The risks are effectively high, not only for the IT department, but for the business as a whole.

3.1 Strategic Human Resource Management

Walton (1985) offers one of the earliest conceptualizations of human resource strategy. He distinguishes between two types of employment, namely, one that is focused on imposing control and another that is focused on eliciting commitment. He also discusses a transitional strategy which describes the movement from control to commitment. Each strategy has associated with itself a number of practices related to job design principles, performance expectations, management structures and systems, compensation policies, employment assurances, employee wide policies, and labour management relationships. Walton notes that the commitment strategy requires considerable

amount of investment in training and development, in compensation, and in providing employment assurances.

Drawing upon extensive prior work that has examined the effects of human resource practices on firm performance, Youndt, Snell, Dean and Lepak (1996) argue that the impact of an HR system on operational performance is moderated by the manufacturing strategy adopted by a firm. In particular they examine this prediction for two HR systems; an administrative type system and a human capital enhancing type of system.

The administrative strategy is one which mirrors the control strategy of Walton (1985). A human capital enhancing HR system represents a shift in focus from physical work to knowledge work. HRM literature also mentions several practices which are pronounced as best practices - employment security, selective recruitment, high wages, incentive pay, employee ownership, information sharing, participation and empowerment, self - managed teams, training and skill development, cross utilization and cross training, symbolic egalitarianism, wage compression, and promotion from within.

Delery and Doty (1996) describes two ideal types of employment systems - the market type system and the internal system. These are differentiated on the basis of seven high performance work practice categories; internal career opportunities, training, results oriented appraisal, profit sharing, employment security, participation, and job descriptions. A market type system focuses on extracting maximum productivity from the employee and hence doesn't provide much of employment security. The internal market system is an internal labour market where promotions tend to be made from within and extensive training is given to employees. During recruitment of IT

professionals firms seek a mix of two very different skill sets; IT skills and business skills (Lee, Trauth, Farwell, 1995).

Strategies in practice do not fit neatly into the ideal types; instead they fall along a continuum of types defined by the desired length of the employment relationship. Another reason for categorization into more than one IT HR strategy is differences in perceptions within the IT organisation arising from lack of a clearly articulated strategy, lack of a shared understanding of a strategy, or lack of success in implementing a strategy. Another explanation for inconsistency in strategy categorization could be that an organisation is following more than one dominant strategy. Adopting more than one strategy within the same organisation could create management difficulties in that IT professionals do not perceive a consistent message from management.

A final potential explanation for categorization into more than one strategy is that invalid or unreliable measures of IT HR strategy have been used. Such problems could arise from weak conceptualization or operationalisation. It is important to reiterate that the four named strategies represent ideal theoretical prototypes. In practice it is likely that there will be substantial variation in IT HR strategy implementation across organisations with similar strategies. In addition to managerial choice, variation in strategy implementation is also likely to be influenced by the firm's strategy, role of IT in business strategy (Applegate, McFarlan & McKinsey, 1996) as well as an outcome of path dependence, i.e., the context within which the strategy evolved (Becker & Gerhart, 1996).

3.2 HR Strategies in IT / IT HR Strategies

HR strategy is defined by an organisation's bundle of practices in several IT HR areas, including recruitment and selection, appraisal, reward, and

development. HR practices designed to achieve productivity are essential components of any IT HR strategy and it is a coherent bundle of HR practices (Becker and Gerhart, 1996). HR strategies are treated as collections or bundles of practices that reflect some coherent managerial purpose or intent (Delery & Doty, 1996; Walton, 1985). One stream of literature in HRM describes such coherent bundles of multiple practices. A second stream of work adopts a more contingent approach to understanding the effects of HRM practices, arguing that the relationship between the use of specific practices and outcomes such as performance or turnover is moderated by situational and individual contingencies (Delery and Doty, 1996).

There are two extreme HRM strategies with different emphases on the length of time that the organisation intends to retain the IT professional. Two configurations have been added between them, namely balanced professional and high performance professional strategies. These configurations are based on 5 dimensions of practices consisting of (Agarwal and Ferratt, 1999).

- The IT organisation's recruiting posture, including the nature of skills sought during recruiting
- The design of compensation and benefits, including monetary incentives
- Other practices related to productivity - work arrangements, performance measurement, training and development focused on immediately needed skills
- Practices related to concern for the individual - such as accommodating different life styles and building a sense of community
- Long term career development and employment security assurances

The strategic human resource management (SHRM) literature offers five rich theoretical perspectives that can enable managers to make decisions on IT HRM strategies.

First theoretical perspective, the universalistic approach, argues that there is a set of HRM practices that is effective across multiple organisational contexts regardless of situational contingencies (Pfeffer 1994). It basically views each IT HRM practice as independent of all the others. An example of a criterion for judging the success of an HRM practice is productivity. In this mode of theorizing, the relationship between an HRM practice and the criterion for success is independent of any other HRM practice and, generally, more of a best practice is desirable. For example, more training leads to greater productivity independent of the effects of any other practices, such as job security. Consequently, a “best practice,” such as extensive training, leads to the greatest productivity. This “best-practice” or “high-performance work system” approach exhorts all firms to implement specific practices for managing workers, e.g., extensive training and incentive pay, to realize desired outcomes.

A second perspective, the contingency approach, suggests that the effects of HRM practices on outcomes are moderated by a variety of contingency variable such as firm strategy (Youndt, Snell, Dean, Lepak. 1996).

The third strategy i.e., the configurational perspective focuses attention on patterns of HRM practices that exhibit nonlinear, synergistic effects on outcomes (Doty and Glick 1994). Configurational theories therefore focus on the identification of sets of practices, recognizing that the benefit of adopting one practice may increase with the adoption of other

complementary practices (Milgrom and Roberts 1990, Pil and MacDuffie 1996). The key elements of configurational theory are embedded in the following two ideas: there are a finite number of configurations for any given organisational phenomenon (Miller and Friesen, 1984) that can be adduced theoretically or derived empirically. The patterns generally possess the property of "fit" such that greater fit leads to more effective outcomes. Both ideas are based on the evidence that organisational attributes exhibit a tendency to fall into coherent patterns (Meyer et al., 1993). Configurational theories in the organisational structure domain include the seminal work of Mintzberg (1983). In the Information systems domain configurational theory has been used to explore patterns of inter organisational cooperation in the development of IS (Sharma and Yetton, 1996) and IT outsourcing (Lee et al. 2004). The concept of configurations has been extended to research on HRM.

The contextual perspective proposes an important shift in the point of view of the analysis of SHRM. It introduces a descriptive and global explanation through a broader model, applicable to different environments encompassing the particularities of all geographical and industrial contexts. The main contribution of this approach lies in the re consideration of the relationship between the SHRM system and its context.

Effective management of the organisational portfolio of IT resources is a critical issue confronting senior executives. Organisations manage human capital by instituting a variety of human resource and work practices (Huselid, 1995, Agarwal and Ferratt, 1999). Such practices typically include activities associated with recruiting workers with desired competencies, providing training and development opportunities, designing jobs and performance appraisal processes, developing compensation

systems and the like. Collectively this set of practices for managing workers is an organisation's configuration of HRM practices and is a proximal determinant of significant outcomes such as employee turnover, job performance, job satisfaction, and firm performance (Huselid 1995; Delery and Doty 1996; Lepak and Snell 1999).

3.3 Rationale for Organisations to adopt some HRM Practices and reject others

Mahesh Subramony (2006) explores reasons why organisations adopt or reject human resource practices. This issue is important to multiple constituencies involved in the adoption of HR practices. Like other forms of investment, the adoption and implementation of HR practices involve costs in the form of money, organisational resources, and time that could be devoted to other strategic issues. Therefore, managers need to be sure that the decision to adopt a practice is the right one and would the HR practice benefit the organisation, given these costs? For HR departments, a track record of adding value by adopting effective HR practices is likely to lead to benefits in terms of credibility, visibility, and power; a history of unsuccessful programs could be detrimental to the department's image among managers and employees (Buyens & De Vos, 2001). Finally, employees are likely to trust managers and HR departments that demonstrate long-term commitment to effective HR practices. Constant change in practices with one ineffective practice replacing another is likely to lead to "initiative fatigue" and resistance to change (Abrahamson, 2003).

Although several explanations have been proposed to explain the issue of adoption/rejection, these vary widely and typically focus on limited aspects of the phenomenon. For instance, the low rates of adoption of effective HR practices have variously been attributed to the slow diffusion of knowledge

from researchers to practitioners (Johns, 1993), managerial perceptions of utility (Boudreau & Ramstad, 2003), and the complexity of implementation (Pfeffer & Sutton, 2000). These varied explanations by viewing the decision to adopt or reject an HR practice as an outcome of both rational and non-rational forces operating in organisations.

Four theoretical approaches enable us understand the decision by firms to adopt or reject HR practices. Two of these approaches, economic and alignment, stem from the emerging field of strategic human resource management (Lengnick-Hall & Lengnick-Hall, 1988) and suggest that close ties between human resource practices and business objectives or outcomes will increase the probability of adoption. The diffusion and decision-making approaches, on the other hand, focus on the non rational aspects of managerial decision making (Abrahamson, 1996; March, 1994), and view adoption and rejection decisions as emerging from the interplay between managerial judgment, organisational constraints, and institutional pressures that encourage imitation. These approaches have been discussed below.

3.3.1 The Economic Approach

The economic approach attributes acceptance of HR practices to their connection with the firm's financial results. According to this view, HR practices that help the organisation maximize its profits through cost reduction or revenue generation have a better chance of being accepted than those that do not obviously provide these benefits. At least three different research streams address the economic benefits of HR practices.

a) Utility Analysis

Utility is typically demonstrated by assigning monetary values to HR practices. Utility - analysis models have three important

characteristics. First, utility analysis modeling requires the calculation of the expected payoff from using the HR practice. Second, the benefits from using the practice are compared to the monetary costs of its implementation. Third, the comparison of the HR practice is with a null situation, where there is no such practice.

b) Human Capital

The human capital approach attributes the focus on reducing HR costs to the way intangibles are measured and presented by firms. It has been observed that intellectual capital and knowledge are not measured or reported adequately in income statements (Stewart, 1997). People-related expenses such as recruiting, selection, training, and compensation are subtracted from the firm's revenue and reflected in the income statement every year. The benefits from hiring, training, and compensating high-value employees are not reflected in these statements, except in terms of the ultimate output measures or lagging indicators, such as sales. Although the human capital approach provides a compelling argument in favor of investing in people, very few firms have incorporated or paid serious attention to intellectual capital measures in their financial statements.

c) High - Performance Work Practices

Although the specific practices vary across studies, their general focus is on developing a skilled and motivated workforce through the application of sound HR principles, such as rigorous employee selection, reward for performance, training, and employee involvement.

3.3.2 The Alignment Approach

The alignment approach argues that many managers view the human resources function as being “disconnected from the real work of the organisation” (Ulrich, 1997). According to this view, the HR function traditionally has assumed an administrative or transactional role and is perceived by managers as being distant from the creation and implementation of business objectives. This distance, in turn, reduces the function’s credibility and competence in promoting effective HR practices. To address this problem, it has been proposed that the human resource function should take on a more proactive partnering role in formulating and implementing the firm’s business strategy, and by measuring and tracking HR outcomes.

a) **Strategic Partnering**

A role in strategy formulation requires the presence of HR representatives at very senior levels in the firm, and strategy implementation requires the alignment of HR practices with the firm’s business objectives. For example, in a firm pursuing a product innovation strategy, the HR function would need to recruit and select employees who have the potential to create innovative products, create performance management systems that reward innovation, and train employees to use tools and techniques related to innovation.

Some of the important benefits of strategic partnering include -

First, it allows HR decision makers to prioritize their decisions on the basis of their perceived impact on the business.

Second, prioritization of HR decisions also leads to prioritization of the resources required to implement these decisions

Third, HR decision makers can influence the adoption of HPWP s by aligning these with business objectives, with existing HR practices

b) Measurement of HR Outcomes

The alignment perspective stresses the importance of rigorously measuring employee related outcomes and integrating these measures with business measures. This process is usually accomplished through the design of an HR scorecard integrated with the firm's balanced scorecard (Becker, Huselid, & Ulrich, 2001; Kaplan & Norton, 1992). The balanced scorecard, in theory, provides the firm with a way to heighten the importance of human resources by placing human resource metrics on an equal footing with operating performance, customer, and financial measures. HR metrics such as turnover and employee commitment are considered "leading indicators" influencing future business performance (the lagging indicators). Scorecards can assist firms in communicating strategic priorities to employees, balancing financial and non financial goals, and linking financial rewards to effective management practices (Kaplan & Norton, 1992).

3.3.3 The Decision-Making Approach

The decision-making approach provides a psychological or "micro" explanation for why organisations adopt or reject various HR practices. Research on judgment and decision making (JDM) indicates that rational

reasoning and intuition are distinct processes, each leading to different outcomes for the same problem-solving tasks. While the process of reasoning is slower, effortful, conscious, and deliberate, the process of intuition is fast, automatic, implicit, and often emotionally charged.

3.3.4 The Diffusion Approach

Diffusion has traditionally been defined as the process by which innovations are communicated through certain channels over time and among members of a social system (Rogers, 1962). Innovations are adopted because they are perceived as providing solutions to existing problems in an uncertain environment (Rogers, 1995). According to the diffusion approach, innovations are passed along faster in groups that are characterized by similarity among members on key attributes and slower in groups where members differ on these key attributes.

The decision-making and diffusion approaches present a significant part of the solution to the issue of adoption by attributing these decisions to the institutional and psychological processes underlying the decision to adopt or reject HR practices. These approaches, along with the economic and alignment approaches, help create a comprehensive picture of the dynamics underlying adoption/rejection decisions.

The overview of the literature of Different Approaches for Adoption and Rejection of HR Practices by Organisations is presented in the exhibit 3.1 below:

Exhibit 3.1. Overview of literature of different approaches for adoption and rejection of HR practices by organisations

Approaches	Literature	Reason for Adoption	Reason for rejection
Economic	Utility Analysis, High Performance Work Practices, Human Capital	HR practice delivers Economic value	HR practice perceived as “cost” and as delivering inadequate value
Alignment	Strategic HRM, Linkage Research	HR practice aligned with corporate strategy	HR strategies and practices not aligned with corporate strategy; HR department not a strategic partner
Decision making	Social/Cognitive Psychology, Behavioural Economics	Decision making processes (heuristics, intuitive decision making, risk taking), that are conducive to the adoption of an HR practice	Decision making processes that are not conducive to the adoption of an HR practice (e.g. over emphasis on speed leading to lowered decision quality)
Diffusion	Diffusion of innovations, Bandwagons	HR intervention proven effective inside or outside the organisation ; consistent with fads or fashions	Lack or decrease of interest in current intervention and emergence of interest in another

Source: Mahesh Subramony (2006) “Why organisations adopt some human resource management practices and reject others”, Human Resource Management, Summer. pp. no. 203

3.4 Concept of "Best Practice"

In recent years there has been a considerable degree of interest in the notion of 'best practice' HRM, inspired by the work of Jeffrey Pfeffer. Along with other contributions from the UK and the USA, this has resulted in assertions that a particular bundle of HR practices can increase profits irrespective of organisational, industrial, or national context. Pfeffer's work has been complemented by many other American studies (e.g. Arthur, 1994; Huselid, 1995; MacDuffe, 1995; Delaney and Huselid, 1996; Delery and Doty, 1996; Huselid and Becker, 1996; Ichniowski et al., 1996; Youndt et al., 1996) and by some in Britain as well (Wood, 1995; Wood and Albanese, 1995; Patterson et al., 1997; Guest and Conway, 1998; Wood and de Menezes, 1998). The notion of 'best practice' HRM is reasonably familiar to most specialists in HRM and industrial relations. Pfeffer identifies seven practices of successful organisations. They are employment security, selective hiring, self managed teams, high compensation contingent in organisations, extensive training, reduction of status differences and sharing information.

3.4.1 Employment security

This is seen as fundamental in order to underpin the remainder of the HR practices, principally because it is regarded as unrealistic to ask employees to offer their ideas, hard work, and commitment without some expectation of security on their part. In Japanese companies employees are offered some degree of security in return for agreeing to mobility and flexibility in their employment. A further reason for providing employment security is offered by Pfeffer (1998) in relation to costs and competitors: laying people off too readily 'constitutes a cost for firms that have done a good job selecting, training and developing their workforce . . . layoffs put important strategic assets on the street for the competition to employ'.

3.4.2 Selective Hiring

This is seen as an effective way to achieve ‘human capital advantage’ by recruiting outstanding people and ‘capturing a stock of exceptional human talent’ (Boxall, 1996) as a source of sustained competitive advantage. Even though the notion that employers want to recruit the best people available is hardly new, this is nowadays more likely to be systematized through the use of sophisticated selection techniques and taking greater care when hiring. As Wood and Albanese (1995: 17) indicate, technical ability is not the only, or even the most important, attribute that employers seek in new recruits; indeed, two of the major facets which are sought are trainability and commitment.

3.4.3 Self-managed teams

This practice has become more prevalent over the last decade for a variety of reasons. It is now identified by most employers as a fundamental building block in their organisation. It has become one of the key attributes that employers look for in new recruits, something which is asked for in references, and which even plays a part in courses organized for school students. It is typically seen as a route to better decision making and the achievement of more creative solutions (Pfeffer, 1998).

3.4.4 High compensation contingent on organisational performance

There are two elements to this practice – higher than average compensation and performance-related reward – although both send a signal to employees that they deserve to be rewarded for superior contributions. To be effective, this would need to be at a level which is in excess of that for comparable workers in other organisations so as to attract and retain high-quality labour. In addition, rewards should reflect different levels of

contribution and either be paid along with basic rates of pay or provided through profit sharing or share-ownership schemes.

3.4.5 Extensive training

Having recruited ‘outstanding human talent’, employers need to ensure that these people remain at the forefront of their field, in terms not only of professional expertise and product knowledge but also in getting the best of situations. Boxall (1996) views this as one element in ‘human process advantage’, the idea that organisations aim to synergize the contribution of talented and exceptional employees. There is little doubt that there has been a growing recognition during the last decade of the importance of training and development, and even learning, as a source of sustained competitive advantage as employers introduce more skills-specific forms of training and experience continuing skills shortages in some areas. Pfeffer (1998) sees this in terms of both the amount of training provided and the budget devoted to training, especially in lean times.

3.4.6 Reduction of status differences

This again has some of its roots in the practices of Japanese organisations and in symbolic manifestations of egalitarianism – such as common canteens, company uniforms, and similar sickness and holiday entitlements – as well as in employers sending messages to manual workers or white-collar staff that they are valuable assets who deserve to be treated in a similar way to their more senior colleagues. It is also seen as a way to encourage employees to offer ideas within a system of ‘open’ management.

3.4.7 Sharing information

According to Pfeffer (1986), there are two reasons why this practice is essential. First, open communications about financial performance, strategy,

and operational measures convey a symbolic and substantive message that employees are trusted as well as reducing the role of the grapevine in spreading rumours. Second, if team working is to be successful and employees are to be encouraged to offer ideas, it is essential that they have information upon which to base their suggestions and know something about the financial context in which their ideas are to be reviewed. The notion of information sharing or employee involvement appears in one form or another in just about every description of, or prescription for, 'best practice' or high-commitment management.

3.5 Innovative Approaches to HRM in Workplaces

A number of terms describe workplaces with innovative approaches to human resource management, including 'high-commitment management, high-involvement systems, transformed workplaces, flexible production systems and high performance work systems' (Wood, 1999). Lawler (1986), Pfeffer (1994) and others argue that the benefits of innovations in work practices are manifold. They are likely to contribute to improved economic performance when three conditions are met: when employees possess knowledge and skills that managers lack; when employees are motivated to apply this skill and knowledge through discretionary effort; and when the firm's business or production strategy can only be achieved when employees contribute such discretionary effort (MacDuffe, 1995). New work practices typically reduce the need for supervision, and alternative forms of work organisation promote flexibility in deployment so that labour can be used more efficiently. Innovative arrangements also have the potential to increase employee morale, thereby improving performance through reduction in grievances and through greater effort and diligence.

An effective organisation is vital to success. However research shows that only 15% of the companies have an organisation that helps them to outperform in a competitive environment. A high performance organisation is known by five important attributes namely, compelling leadership and direction, accountability, talented work force, frontline execution and high work performance culture (Rogers and Blenko, 2006). A high performance work culture comes only through the introduction of innovative human resource practices.

Innovative HR practices have been defined as "the intentional introduction and application of any previously unused concept, practice, process or system designed to influence or adapt the behaviour of employees with the aim of achieving improved organisational performance, identified and implemented by human resource practitioners." They are likely to contribute to improved economic performance only when three conditions are met: when employees possess knowledge and skills lacked by managers; when employees are motivated to apply this skill and knowledge through discretionary efforts; and when the firm's business or production strategy can only be achieved when employees contribute such discretionary efforts (MacDuffie, 1995).

Significant progress has been made linking innovative HR practices such as systems of high performance work practices, to organisational performance. Research has suggested that not only do innovative HR practices result in tangible organisational results (Inchinowski, Kochan, Levine & Olson, 1996) but assist organisations in developing innovative solutions as the need arises (Schuler & Jackson, 1999).

3.5.1 High - Performance Work Practices

Research evidence has steadily accumulated over the past two decades demonstrating the positive impact of high-performance work practices

(HPWPs) on business performance (Huselid, 1995; MacDuffie, 1995; Wright, Gardner, Moynihan, & Allen, 2005). It has been proposed that HPWPs are most effective when they operate together as a sophisticated and internally consistent system or bundle (MacDuffie, 1995). Firms adopting these practices, therefore, need to make a significant investment in realigning their various HR subsystems to reflect this high-performance emphasis. In addition, it has been proposed that in order to be successfully adopted and to provide an inimitable competitive advantage, HPWPs should be integrated with the firm's unique strategy and structure (Becker & Gerhart, 1996).

3.5.2 High Performance Work Systems

The burgeoning literature on ways in which human resource management might lead to superior organisational performance includes reference to 'high-commitment management' (e.g. Gallie et al., 2001; Wood, 1995; Wood and Albanese, 1995), 'high involvement work practices' (Guthrie, 2001; Pil and MacDuffie, 1996), and 'high-performance work systems' (HPWS). The notion of high-performance work systems (HPWSs) is no longer novel in the literature on industrial relations and strategic human resource management. HPWS practices contribute to improvements in employee performance and thence to organisational performance by three interrelated, causal routes (Cooke, 2001) (a) by developing employee skills and abilities (i.e. their 'capability' for performance); (b) by increasing an employee's motivation for discretionary effort; and c) by providing employees with the opportunity to make full use of their knowledge, skills and other attributes in their jobs.

Early reviews of the HPWS notion pointed to a confusing array of definitions (Becker and Gerhart 1996), much of this caused by theorists compiling lists of 'best practices' without establishing an internal logic for

their chosen ‘system’. While the set of practices needed is inevitably dependent on industry and occupational contexts (Appelyard and Brown 2001; Kalleberg et al. 2006), at the heart of the dominant HPWS model is a process of building higher levels of employee involvement in decision-making, on the job and/or off it.

It has been perceived that exposure to practices associated with high employee involvement will predict positive employee outcomes in the form of higher job satisfaction, lower stress and fatigue, and better work–life balance. In order to validate this finding tests were conducted and on the basis of the evidences presented therein it can be concluded there is a distinct possibility of a managerial ‘high-road’ to organisational success that also benefits employees through the introduction of HPWS. The study also supports the view that HPWSs which foster and reward employee involvement are likely to have clear benefits for them.

3.5.3 High Involvement Work Systems

A growing body of research reveals that enormous returns can be obtained through the implementation of what are variously called high involvement or high performance work systems (Pfeffer and Veiga, 1999). The gains from these include harder worker, responsible work and smarter work. Systems such as teamwork are established, they influence workplace practice, employee attitudes change, with increased satisfaction or commitment, there is a consequent effect on behaviour, and this in turn feeds through to the performance of the work unit and eventually the company.

3.5.3.1 Effects of High Involvement Work Systems

HIWS (also referred to in the literature as high-involvement organisations, high-performance work systems, and high-performance

organisations) represents an organisation design perspective that has attracted the attention of both practitioners and researchers in recent years and is increasingly being used by Fortune 1000 companies (Lawler, Mohrman and Ledford, 1992, 1995,1998). Foundational conceptual development by Hanna (1988); Nadler and Gerstien (1992); Lawler (1996); Lawler, Mohrman, and Ledford (1992, 1995, 1998) and subsequent refinement by Farias and Varma (1998) and Pfeffer and Viega (1999) have distinguished several interrelated core features of such work systems—that is, involvement/empowerment, trust, goal alignment, development, teamwork, performance-enabling work structures, and performance-based rewards.

However Forrester (2000) predict that empowerment without appropriate structural support systems will be ineffective. Proper training and development is required to enable employees to be comfortable with and competent in exercising their power. Similarly, goal setting, pay/reward, and information/communication systems, along with other design features, need to be structured to both reflect and support these underlying values. HIWS, therefore, represents a holistic and integrated approach to organisation design.

HIWS empirical research has principally focused on how it affects productivity, quality, customer satisfaction, and market and financial performance, with the explicit intention of making a strong business case for these practices (Pfeffer and Veiga 1999). Several recent empirical studies have examined the combined effects of multiple HIWS core features. Arthur (1994), in the manufacturing sector has linked higher productivity to "commitment based" practices such as decentralized, participative decision making; training; performance bonuses; and social events. In the service sector, Hallowell, Schlesinger, and Zornitsky (1996) connected both employee and customer satisfaction in insurance companies to “internal service quality”

enhancing practices such as information sharing, teamwork, management support, goal alignment, training, communication, and service-based rewards. Batt (2002) found that “high-involvement” practices such as autonomy, team collaboration, and training are related to less employee turnover and increased sales growth in telecommunication service centres. In studies looking across a wide variety of publicly traded companies, Huselid and his colleagues (1995, 1997) found that interrelated high-involvement strategic human resources practices such as teamwork, training, information sharing, performance-based pay, participation, and empowerment are associated with reduced employee turnover and increased productivity, cash flow, financial performance, and market value.

Although only one of this recent stream of HIWS empirical research directly examined employee satisfaction (Hallowell, Schlesinger, and Zornitsky 1996), extensive literature on key HIWS components, such as participation, autonomy, self-direction, and trust, strengthens the basis for expecting positive effects of HIWS on satisfaction. For example, employee satisfaction or organisation commitment have been linked to participative management (see a meta-analysis of such studies by Wagner, 1994), self-directed work teams (see review of a large number of studies published on this form of empowerment by Farias and Varma 2000), and organisation trust and fairness (Cohen-Charash and Spector 2001). Considerably less research evidence exists confirming the relationship between comprehensive deployment of HIWS.

Such practices enhance financial performance (Huselid, Jackson, and Schuler 1997) and hence may be justified both in humanistic and financial terms. In addition, results confirm that HIWS is associated with greater employee satisfaction, which, in turn, is associated with a host of cost-sparing

consequences such as reduced stress and turnover, fewer leaves of absence, and lower work-related disability and violence claims. When these are combined with shortened lengths of stay and lower variable costs per day, as reported in prior research (Karasek 1990), the cost-dampening potential of elevated employee satisfaction is indeed compelling.

3.5.4 Workplace Innovations

A study of innovative work practices can contribute to ones understanding of firms' behaviour. It provides an insight into how organisations are responding to wide-ranging economic and social transformations. This puts us in a better position to answer questions like whether the forces of so-called "new competition" necessitate root-and-branch changes to established working methods, or whether firms are able to get by with more modest, incremental reform. Secondly, measuring the use of innovative work practices can deepen our understanding of unfolding relationships and dynamics within organisations. Literature identifies a number of work practices that are claimed to facilitate cost savings, quality improvements and greater operational flexibility within enterprises (Osterman, 1995, 1998). The common thread connecting these practices is that they simultaneously provide front line employees – the employees who actually make the product or provide the service – with the resources and the opportunity to apply their practical knowledge of the organisation's products and processes to solving problems and improving performance.

3.5.4.1 Self-directed/semi-autonomous teams

The emergence of self-directed and semi-autonomous teams has received considerable attention in the literature (European Foundation For the Improvement of Living and Working Conditions, 1999; Roche and

Geary, 1998; Stevens, 1999). These are groups of front-line employees that are assigned collective performance targets by management. Apart from this, however, they enjoy wide-ranging autonomy to manage their own budgets, to design their own processes and to schedule and distribute work within the team. As a result of delegating responsibility to the most informed local agents it is claimed that self directed teams can deliver better decisions, more effective problem solving, greater flexibility and innovation (Cooke, 1994). As with other innovative work practices, however, the impact of teams on the quality of working life is an open question. Factors such as whether teams are compulsory or voluntary, the level of delegative autonomy devolved, and the range of issues over which teams have decision-making authority, etc. will all determine how teamwork is experienced by employees (OECD, 1999; Klein, 1989).

3.5.4.2 Task forces

These differ from the above in that they are issue-focused teams. In other words they are convened on an ad hoc basis to address a particular issue or solve a specific problem. As such, the scope of these teams is more narrowly defined. Task forces are management led, but front line employees are included because of their extensive hands-on experience. However, unlike autonomous teams, employees' participate in task forces on a consultative rather than a decision-making basis – management retains the right to veto any solutions or recommendations proposed by the task force. A final difference between self-directed/semi-autonomous teams and task forces is that the latter operate “off-line”. This means that their business is conducted away from normal productive work.

3.5.4.3 Product and business development teams

These are also issue-focused teams, but they are formed at the early stages of a new business activity to ensure an integrated approach to product, process and quality development. They seek to incorporate the concurrent input of representatives from all areas of the operation to avoid costly mistakes and delays (Sweeney, 1998).

3.5.4.4 Job rotation

Job rotation can take the form of multi-tasking or multi-skilling, and both interpretations have distinctly different implications. Multi-tasking reduces downtime by rotating workers through a range of simple tasks as required to smooth out peaks and troughs in the working day (Gunnigle, 1992). This increases firms' productivity, and it may allow them to save money by shedding layers of indirect labour, e.g. cleaners. From employees' point of view it may also relieve boredom and introduce some variety into work. However, it offers employees little in the way of personal development or upskilling. Furthermore, it may lead to intensified work and job losses. Multi-skilling enhances functional flexibility rather differently. The skills and competencies of individual workers are broadened through meaningful cross-training and varied work experience (OECD, 1999; Turner and Morley, 1995). This enables employees to perform a variety of sophisticated functions, to engage in effective problem solving, and to contribute in a meaningful way to teamwork which demands expertise across a range of activities. Unsurprisingly, given the divergence between these different interpretations of job rotation, it can be one of the more contentious innovative work practices (Turner and Morley, 1995).

3.5.4.5 Job enlargement

In addition to rotating front line workers between jobs, flexibility can be achieved by broadening the range of duties attached to each particular job. This is

known as “job enlargement” or “add-skilling” (Gunnigle and Daly, 1992; Turner and Morley, 1995). Typically, this involves extending core job descriptions to include responsibility for simple administrative duties, routine maintenance (on-line maintenance) and quality (on-line quality control). Supplementing the above practices – which facilitate flexibility and workers’ participation in problem solving – the literature also refers to innovative practices which, inter alia, are designed to bring problems to the fore in an aggressive search for continuous improvement within organisations. In the manufacturing sector these practices are known as TQM, and its corollaries of statistical process control (SPC) and just-in-time (JIT). A parallel process is underway in service activities, but perhaps with a greater emphasis on improving service delivery, improving support services for customers, and building a reputation for reliability.

3.5.4.6 Total Quality Management (TQM)

TQM is open to various interpretations. A narrow view treats TQM as a form of quality management that emphasizes the conformance of products and processes to predetermined specifications. The broad view of TQM combines this conformance quality with a continuous feedback loop which drives ongoing improvements in the quality of design (Hill, 1991b). In manufacturing industries this loop tends to be completed by two additional practices: SPC and JIT production.

3.5.4.7 Statistical Process Control (SPC)

SPC involves the use of run-charts, machine reports, etc. to aggressively seek improvements in the design of products and processes.

3.5.4.8 Just In Time (JIT)

JIT reduces inventory buffers to an absolute minimum. As well as freeing up working capital and cutting storage costs, this obliges firms to make ongoing

improvements to the design of their products and processes by solving the problems that continually surface as a consequence of holding low buffer stocks. In addition, it facilitates flexibility by eliminating the inventories that hinder switches from one output to another. As with the other practices outlined herein, it is impossible to generalize about the implications of JIT and SPC for workers' quality of life. Klein (1989) noted that workers who are exposed to such practices tend to become more self-managing than in a traditional command and control environment. They also gain a better understanding of the overall process, and are likely to develop some new skills. But she also observes that JIT and SPC are designed to eliminate variations within production, and that this can intensify the pace of work and rob employees of their autonomy (see also Sweeney, 1998). Ultimately, the effect of all of these workplace innovations on employees will depend on how they are interpreted and implemented at local level.

3.5.5 High performance HR Practices

High performance HR systems are characterised significantly by rigorous selection, investment in training, work design so that employees have opportunities for participation and decision making, and rewards structures designed to recognise high performers and promote from within (Delery & Doty, 1996; Huselid, 1995; Macduffie, 1995). The underlying rationale of this stream of research is that these are the "best practices" that impact firm performance by enhancing the skill, motivation, and empowerment of the workforce (Delery, 1998; Huselid & Becker, 1996). High-Performance HR systems rely on the creation of mutually investment based employment relationship, wherein an organisation invests in workforce skills and opportunities and, in turn, expects employees to be qualified and motivated to make valuable work-related investments in the organisation (Huselid, 1995).

In the last decade a number of studies have documented a positive relationship between a firm's use of these sets of HR practices and firm level performance outcomes (e.g. Arthur,1994; Huselid, 1995; MacDuffie, 1995; Ichniowski et. al, 1997).

3.6 Innovative HR Practices / HRM Innovations (HRMI)

In the literature of organisational change, innovation is a particular type of change. Change refers to any alteration in structure, process, inputs or outputs of an organisation. Innovation refers to changes that are new to the adopting organisation. Thus innovation is change but not all change is innovative. When something novel for all organisations is adopted the term “invention” is used to describe that change (Robey and Sales, 1994).

The exhibit 3.2 below summarizes the relationships among these three “nested” concepts of change, invention and innovation.

Exhibit 3.2. Difference between Change, Invention and Innovation



Source: Daniel Robey and Carola Sales, (1994), *Designing Organisations*, pp.no.393

The term innovation has been used to refer to two related concepts in the 'innovation' literature. Some researchers have used the term to refer to the process of bringing new products, equipment, programmes or systems into use (Damanpour, 1991) while others have used it to refer to the object of the innovation process, that is, the new product, equipment, programme or system (Rogers, 1983). The latter use of the term is adopted in the present research, following Wood (1995) who defined innovative HR practices as ideas, programmes, practices or systems related to the HR function and new to the adopting organisation. Use of the term innovation has also differed in respect of whether 'objective newness' is considered an important criterion of innovation. While some researchers consider objective newness to be an important criterion, others consider an innovation to be a product, programme or system which is new to the adopting organisation (e.g. Damanpour, 1991), arguing that whether an idea is objectively new matters little so far as human behaviour is concerned (Rogers, 1983). The present research study adopts the latter position.

New economic realities have put pressure on the human resource function to demonstrate how it can add value to the firm's bottom line. Early conceptualizations often questioned the function's relevance to organisational effectiveness, mainly for the fact that HR was seen to hold a primarily a reactive, administrative role (Drucker, 1954; Lundy, 1994; Legge, 1978). Moreover, a typically theoretical approach to HRM has made it difficult in the past to articulate how the HR function could actually influence strategic level objectives (Wright and McMahan, 1992). Over the last few years, however, the human resource function has gained significant legitimacy. This has been aided by a substantial body of evidence linking innovative approaches to human resource management with various

indicators of organisational success, and by theoretical developments based on to the resource-based view of the firm (Barney, 1991). These developments have helped shift attention squarely on the importance of people in achieving competitive advantage. Research has tended to suggest that not only do HRM innovations result in tangible organisational results (Ichinowski, Kochan, Levine & Olson, 1996) but they also assist organisations in developing innovative solutions as the need arises.

The intentional introduction and application of any previously unused concept, practice, process or system is designed to influence or adapt the behaviour of employees with the aim of achieving improved organisational performance, identified and implemented by human resource practitioners. This definition better reflects the wide scope of innovative HR practice (from functional activities to wide ranging strategic initiatives) capable of affecting the entire social structure of an organisation. Importantly it also attempts to transfer ownership and responsibility for the HRM process to HR professionals

A comprehensive review of both innovation and strategic Human Resource Management Innovations (HRMI) literature has identified five attributes or characteristics, which if possessed by practitioners allow them to realise the role outlined above. Five individual elements were identified as having the potential to significantly impact on the adoption of an HRMI, these are dealt with below.

Political influence refers to an HR practitioner's ability to gain support (resources, commitment, and encouragement) for the adoption of the chosen practice. The degree of political influence an individual holds within the organisation can determine the degree of autonomy and freedom required to

explore innovative options; the right of access to those needing to be influenced (Legge, 1978); and the appropriate level of power and status required for approval (Terpstra et al., 1996). Inherently linked to this is the ability of a practitioner to effectively build coalitions within organisations, to achieve organisational consensus, and to develop environments conducive to innovative practice (McGourty, Lemuel & Dominck, 1996). The perceived ability of an HR practitioner to undertake networking activities in order to gain political support is considered highly significant in their decision to adopt an HRMI (Frost & Egri, 1991).

Also critical is the possession of what has been termed “domain specific” knowledge (Amabile, 1988). At the most superficial level it is clear that the type and nature of information possessed by HR practitioners will influence choices regarding which HR practices to adopt (Terpstra et al., 1996). Kane et al (1999) make the assertion that those with the ability to provide superior information to decision makers regarding the adoption of HR practices hold significant influence over those decisions. In part the knowledge possessed by a practitioner depends on the extent to which they undertake activities associated with “professionalism”. Membership of professional organisations, maintaining a current knowledge base and the ability to research new developments via methods such as benchmarking and networking are widely acknowledged as key determinants of innovative practice as a key causal factor in determining the adoption of innovative practice (Sanchez et al., 1999; Swan & Newell, 1994).

The link between personality and innovative activity has also been the source of considerable research. Amabile (1988) identified ten factors promoting individual creativity. Included were various personality traits such as self motivation; special cognitive abilities; risk orientation;

expertise in the area; social skill; brilliance; and naiveté. Kamm (1987) also acknowledged a need for socialized power, achievement and perceptions regarding exposure to risk (as a result of adopting the innovation) as impacting on a manager's development of criteria for choosing innovations. Similar to aspects of individual creativity, elements such as risk taking propensity; inspiration; leadership characteristics (confidence in others, leading by example, intellectual stimulation); and individual innovativeness have all been identified as key elements of an innovation champion (Howell & Higgins, 1990).

3.7 Human Resource Management Innovations (HRMI) Adoption – Contextual Elements

HR practitioners do not operate in isolation, rather they have to negotiate a number of varied and challenging contextual elements that both facilitate and constrain their actions (Jackson et al., 1989). These elements have been categorized into three key areas: HR group; organisational; and external environmental factors.

3.7.1 Group Determinants of Human Resource Management Innovation Adoption

The peculiar characteristics of an HR group can do much to determine the activities and behaviours of the HR practitioners within it.

Role of the HR group: Those HR groups possessing a legitimate strategic role within an organisation would be more likely have the authority, opportunity and resources to search for and adopt innovative HR practice (Gooderham et al., 1999). HR groups with a purely operational focus in addition to lacking legitimacy have the added difficulty of, in many cases, lacking the skills or ability required for the adoption of innovative practice (Kane et al., 1999).

Group demographics and structure: Research tends to suggest that newly formed HR groups with a degree of functional diversity, knowledge diversity, professional experience and cohesion will be conducive to innovative activity (Damanpour, 1991). The presence of diverse knowledge and experience, combined with a participative climate and effective group leadership can also determine a groups' ability to effectively gain support for any proposed innovation (Tannenbaum et al., 1994).

3.7.2 Organisational Determinants of Human Resource Management Innovation Adoption

The impact of organisational factors on the adoption of organisational innovation has also been widely discussed (e.g. Damanpour, 1991; Kimberly & Evanisko, 1981). They are:-

Size: The majority of research examining the relationship between firm size and HRMI adoption suggests a largely positive relationship (Tannenbaum et al., 1994). Size can have an impact on the adoption of innovation due to the availability of resources via economies of scale (Kimberly & Evanisko, 1981). While aspects such as increased workplace complexity stimulate the need for innovative HR solutions, larger organisations are better able to provide the additional resources required to undertake innovative behaviour (Kane et al., 1994). Other structural variables proposed as possible determinants of HRMI adoption are the presence of technology within the firm (Jackson & Schuler, 1995; Terpstra et al., 1996), organisational life cycle (Koberg, Uhlenbruck & Sarson, 1996), organisational age (Kimberly & Evanisko, 1981), and the competing influence of line management in the organisation (Clark, 1998).

Organisational strategy: Organisations operating in internationally competitive markets, involved in knowledge based activities or pursuing

strategies emphasising variety, quality and service are more likely to adopt innovative HR practices (Hoque, 1999). Closely linked to the relationship between strategy and HRMI adoption is the link between organisation leadership and HRMI adoption.

Organisational leadership: In the most direct sense organisation leaders can determine the role of the HR function of the organisation (Kane & Palmer, 1994). Organisational leadership can also have a significant impact in the development of “innovation friendly” cultures, providing a clear vision and sense of direction and a focus for innovative activity (Arad et al., 1997).

Organisational culture: Cultures demonstrating high levels of internal communication, promoting interactive behaviours and an ability to deal with change, tend to encourage innovative behaviour (Hauser, 1998; Klien & Sorra, 1996). Firms possessing these types of cultures are not only more likely to encourage HR practitioners to undertake innovative activity, but are also better able to adopt innovative HR practice.

Complementary HR practices: The presence of existing effective or complementary HR practices appears to influence the adoption rate of additional “high performance” HR practices (Pil & McDuffie, 1996). High performance HR practices tend to foster innovation through the development of innovation values, encourage information sharing, goal setting and appropriate training and development (Arad et al., 1997).

3.7.3 External Environmental Determinants of Human Resource Management Innovation Adoption

The final category concerns itself with possibly the most distant of factors impacting on the HRMI adoption process namely, external environmental factors. “National influence” refers to the influence of aspects such as national

culture, national institutional frameworks and incentive structures for innovation. While the least examined of the innovation factors, recent research has tended to suggest that national factors can have an impact on the type of HR practices adopted (Gooderham et al., 1999). The vagaries and differences between industry sectors are often cited as possible determinants of innovation adoption (Kane & Palmer, 1994). Sector or industry characteristics influence adoption decisions by providing the context within which “meanings are construed, effectiveness is defined, and behaviours are evaluated” (Jackson et al., 1995). However, a review of the research would suggest that industry or sector characteristics do not guarantee the adoption of certain HR practices; only that, given the opportunity, the type of practices adopted by HR practitioners tend to follow certain industry patterns (Jackson et al., 1989).

Organisations also experience pressure from a range of sources to adopt management practices, regardless of their appropriateness or technical merit. The desire of organisations to be seen as “good corporate citizens”, who are socially responsive, or as “employers of choice” is recognised as a powerful driver of innovation adoption (Kossek, 1989; 1987). Tannenbaum et al. (1994) for example, reported that increased levels of public scrutiny correlated with increased levels of training, recruitment activity and importantly, HR innovation.

In general the literature examining the impact of trade union activity would suggest a positive effect on the adoption of HRMI’s (Ng & Maki, 1994). In fact, much of the research tends to contradict the popular perception that trade unions hinder or resist the implementation of innovative practice (Machin & Wadhvani, 1991; Wagar, 1997). Rather, unionized workplaces tend to demonstrate a greater degree of HR practice sophistication and are more likely to possess a more formalized model of HRM (Ng & Maki, 1994). It has been suggested that HR practitioners are best placed to make decisions regarding the appropriateness and

perceived value of HRMIs mooted for consideration. The position is taken that strategically oriented, professional HR practitioners would resist various forms of innovation bias and be able to effectively identify an organisation's need for a particular HRMI. Such practitioners would possess an understanding of the organisation, be aware of current issues requiring attention, details and technical aspects of various HRMI's and recognize both the value and implications of adopting a proposed HRMI. However, the ability to recognize the need and then identify an appropriate HRMI represents only one aspect of the role required of HR practitioners. Essential to the successful adoption of the proposed practice is their ability to obtain support and resources and realize the opportunity that the adoption of the HRMI presents. It is also suggested that the ability of a practitioner to develop and possess legitimacy within the organisation is essential (Legge, 1978). It is argued that the ability to gain political influence allows for the successful allocation of resources to the project, therefore allowing the adoption of the new practice to continue. In relation to this a study was conducted to ascertain as to what HR practitioners considered to be important determinants of HRMI adoption.

Results showed that degree of support, allocation of resources, access to decision makers and involvement in the strategic process depend heavily on the prescribed role of the HR function. Much of an HR function's legitimacy within an organisation is determined largely by the actions of organisational leaders (Galang, Elsik & Russ, 1999). Among all factors organisational leadership, organisational strategy and the role of the HR group are the three most important factors in HRM Innovation.

3.8 Innovative HR Practices Category

An effective organisation is vital to success. However research shows that only 15% of the companies have an organisation that helps them to

outperform in a competitive environment. A high performance organisation is known by five important attributes namely, compelling leadership and direction, accountability, talented work force, frontline execution and high work performance culture (Rogers and Blenko, 2006). A high performance work culture comes only through the introduction of innovative human resource practices.

Innovative HR practices have been defined as "the intentional introduction and application of any previously unused concept, practice, process or system designed to influence or adapt the behaviour of employees with the aim of achieving improved organisational performance, identified and implemented by human resource practitioners." They are likely to contribute to improved economic performance only when three conditions are met: when employees possess knowledge and skills lacked by managers; when employees are motivated to apply this skill and knowledge through discretionary efforts; and when the firm's business or production strategy can only be achieved when employees contribute such discretionary efforts (MacDuffie, 1995).

Significant progress has been made linking innovative HR practices such as systems of high performance work practices, to organisational performance. Research has suggested that not only do innovative HR practices result in tangible organisational results (Inchinowski, Kochan, Levine & Olson, 1996) but they also assist organisations in developing innovative solutions as the need arises (Schuler & Jackson, 2005).

3.8.1 Employee Acquisition Strategies

In the era of increasing globalization and the struggle to create sustainable competitive advantage, organisations are continuously evaluating

their strategies to ensure they have expertise needed to help achieve the mission of the organisation.

Gatewood and Field (1998) define selection as a "process of collecting and evaluating information about an individual in order to extend an offer of employment." In order to understand fully the value and effectiveness of the selection process, one has to analyze the impact of the employee's contribution to the organisation not only from a cost factor, but also from performance in the short-term and long-term. HR planning involves the process that specifies the activities a firm must use in order to develop its human resources to improve its overall practices (Gatewood & Field, 1998). Companies have to be able to predict labour demands and determine if employees have to be laid off or how many employees have to be recruited within a specified period. HR planning should assess the skills and competencies currently available within the organisation and what other intellectual capital will be needed in the future to meet the needs of the stakeholders adequately.

Another aspect of the acquisition process involves the advertising and recruitment sources. Given the high costs incurred for these processes there is a definite need for HR professionals and other senior leaders to be aware of the effectiveness of the respective sources being used to advertise for and recruit candidates. In assessing the effectiveness of recruitment and advertisement sources an organisation uses to recruit employees, it is imperative to relate the actual performance of the incumbent to advertising and recruitment. Human Resources is much more likely to invest its advertising and recruitment budget where real value is created for the organisation.

Fitz-enz (2001) described the need to ensure that the recruitment function is efficient and further stated that it is better to measure recruiters as

a team than as individuals whenever applicable. In determining recruiter team efficiency, Fitz-enz stated that the measurements should focus on the productivity of their interviewing techniques, the average length of interviews for the respective job groups, the number of interviews needed to make a quality hire. Another means of determining the effectiveness of the recruitment function is to measure the change in the number of qualified candidates available for selection.

HR management practices like fair and transparent hiring, induction and socialization play critical roles in building employee commitment. Procedurally fair hiring practices which are transparent, merit-based and follow rigorous selection process will have deep and long-lasting influence on new entrants (Flood, Turner, Ramamoorthy and Pearson 2001; Lemons and Jones, 2001). Further, well planned socialization and induction processes foster better understanding of organisational values, norms and objectives in new employees (Pascale 1985; Van and Schein 1979). This leads to employees' identification with the organisation (Jones 1986). Similarly, factors such as confirmation of pre-entry expectations (Arnold and Feldman 1982; Premack and Wanous 1985) and role clarity at the time of hiring employees are important to enhance organisational commitment (Morris and Koch, 1979).

3.8.2 Employee Retention Strategies

Studies conducted by Allen, Shore, & Griffeth, 2003; Huselid, 1995; Shaw, Delery, Jenkins, & Gupta, 1998; Vandenberg et al., 1999; Way, 2002) have shown that high-involvement HR practices enhance employee retention. Support theory holds that beneficial actions directed at employees should obligate employees to reciprocate in a positive manner. HR practices represent such organisational actions that may reinforce the employees' beliefs that the organisation values their

contributions and cares about their well-being, which in turn reduces turnover intentions among employees (Eisenberger et al., 1986; Wayne, Shore, & Linden, 1997). Furthermore, investments in high-involvement HR practices may foster the emergence of a positive work climate that, in turn, may result in lower turnover (Rogg, Schmidt, Shull, & Schmitt, 2001; Way, 2002).

3.8.3 Employee Involvement

High-performing work systems share information, involve employees in decision making, and emphasize employee feedback about quality and business processes (Becker & Huselid, 1998; Huselid, 1995; Lawler, Mohrman, & Benson, 2001). Lawler et.al (2001) emphasized employee involvement in problem solving and decision making and made efforts to create an environment that supported feedback. They did this in two ways: with one-on-one consultation involving supervisor and subordinate and through collaboration with co-workers in teams. High-performing supervisors encouraged their employees to participate in meetings and to make presentations to senior managers in the IT function. Employees with good ideas were provided the opportunity to present their ideas to the relevant business unit. Supervisors fostered employee involvement as a way to push decision making downward. They discussed the need to ask employees to suggest their own solutions to problems rather than have supervisors immediately solve the problem for them. This strategy is important in the IT workplace context to develop employees, to prepare them for future responsibilities, and to foster collaboration among multiple experts in teams.

3.8.4 Technical Training and Management Development

High-performing organisations emphasize knowledge and skill development for team and managerial skills as well as technical skills (Lawler et al., 2001). The rapidity with which IT skills can become obsolete makes

continuous technical skill updating essential. Interpersonally oriented managerial and team skills also are essential for ensuring effective workgroups and maintaining a strong customer service orientation. High-performing organisations used many training techniques. These organisations commonly provided challenging job assignments to enhance skills, along with on-the-job training. Employees were encouraged to take classes and to do so during work time. Several companies paid tuition for IT classes at local community colleges and universities. A privately held publishing firm paid for non-IT classes if they were required as part of a degree program. Some companies used intranets to share technical knowledge throughout the company. One global IT services firm delivered guided educational modules via the Internet with learning contests; individuals and workgroups that completed the most training modules won rewards. In other firms in our sample, employees were provided training in leadership skills and opportunities to develop leadership through participation on company committees and in professional organisations. Several supervisors emphasized peer training in workgroups because they believed that workgroups facilitated teaching, learning, and sharing among employees. Individual training needs were considered and assessed regularly as part of performance appraisal and coaching activities.

3.8.5 Career Planning and Development Practices

An organisation's investment in employees' career development and growth evokes positive employee reactions. This is consistent with the argument in the social exchange theory. Employees' perceive growth opportunities are adequate when their organisation provides them enough developmental opportunities, promotion opportunities, and some job security. These policies help employees grow from within and develop organisational commitment owing to a sense of belongingness and obligation towards organisation.

Promotions also result in higher compensation and status, thus affecting organisational commitment positively. But to be effective, promotion practices should be perceived as being fair. Fair procedures, such as merit based promotion, say in training decisions, are an important factor in eliciting employee's organisational commitment (Lemons and Jones 2001). Employees' training and development not only enhances their promotional chances but also enhances their job market value. Past research supports the above view point/position. Existence of adequate promotional opportunities and fair promotional decisions affect the employee's organisational commitment positively (Jago and Deery 2004; Randall 1987; Romzek 1989) and intention to quit negatively (Stumpf and Dawley 1981).

But what is fair can differ between individuals and between organisations. For example, merit-based promotion may be fair in one context, but seniority based promotions may be fair in other settings. Further, perceived investment in employee development positively affects their organisational commitment (Lee and Bruvold 2003). Ahmad and Bakar (2003) found positive relation between training support, training environment, and perceived training benefits on employee organisational commitment.

3.8.6 Performance Appraisals

"Performance management systems make clear to employees what is expected of them and assure line managers and strategic planners that employee behaviors will be in line with the company's goals" (Noe, et al., 2000). Many organisations still rely on the performance appraisal, viewed as an annual ritual and primarily the responsibility of the HR function. Performance management systems are geared to ensure that each employee within the organisation, based on previously conducted job analyses is performing the tasks intended at the

expected level to support the strategic business objectives of the organisation. The thinking among HR practitioners and other business leaders that an annual performance appraisal is essentially performance management must become obsolete. Effective performance management entails a process where each employee is fully aware of his or her role in the organisation, the type of output expected, and how the output is measured. In order to determine the effectiveness of the performance management system in creating advantages for the organisation a few questions need to be addressed. These questions pertain mainly to the goals of the organisation and satisfaction of its employees.

Performance appraisal is a critical HR practice which affects several employee related decisions such salary raise, promotion, training needs, task allocation, transfer decisions etc. Thus its perceived fairness and utility evoke positive employee reactions. Past empirical research shows that a performance appraisal would be perceived fair if the employee has clarity on performance objectives (Jackson, John and William 1995), knows appraisal system well (William and Levy 2000), and is involved in the process (Brown and Robert, 1994; Mowen et al. 1985; Thomas and Robert, 1994). Also developmental feedback and close performance-reward relation affects fairness perception positively (Greenberg 1986).

3.8.7 Rewards and Recognition Practices

The starting point for any reward system design process needs to be the strategic agenda of the organisation (Lawler, 1986). By understanding where the organisation is positioning itself for various intervals in the future, an organisation can design the reward system to provide incentives specifically intended to foster behaviours, attitudes, and outcomes among the workforce that directly correlate with the strategic agenda of the organisation. As indicated by Lawler (1986), numerous studies have shown that effective reward systems can significantly

increase the motivation of individuals to increase their performance. As inferred from these studies, the fundamental intent of rewards in organisations is to provide incentives to achieve individual and organisational behaviours that would enable the organisation to create competitive advantages and maximize the value of the shareholder's investment.

A survey conducted by Watson Wyatt (1998) concluded that organisations with reward systems linked to business strategy to a great extent have higher returns than those with less of a linkage. They concluded that organisations using strategically designed pay systems perform better than the traditional pay counterparts based on financial objectives such as earnings per share, return on assets, profit per employee, and cash flow; therefore, the outputs of an effective reward system are centred around the financial profitability of the organisation and the creation of competitive advantage for the organisation.

3.8.8 Compensation and Incentives

Reward systems and forms of pay structures have their own implications on commitment. Long-term benefits and retained benefits like provident fund and pension scheme (also including employee stock options), and tenure-linked bonuses are useful in eliciting continuance commitment (Klein 1987; Klein and Hall 1988; Tucker, Nock and Toscano 1989; Wetzel and Gallagher 1990). Similarly, benefits like medical facilities, educational loans for children etc., elicit affective and normative employee commitment. Compensation structure is an important determinant of employee reactions. The compensation structure may be either based on seniority or it may be based on performance. There may be differences in preference between employees and organisation on this.

3.8.9 Employee Relations with a Human Face: Treating Employees with Concern

High-performing firms realized the value of building effective relationships with and among their employees. Open communication was acknowledged as an essential element in relationship building. They referred to having “an open door policy” with those they managed. Open communication was seen as essential to managing the commonplace tight deadlines and shifting customer demands. Employees expressed a clear preference for supervisors willing to share and explain the rationale behind decisions. Even when decisions were beyond the control of the IT function, sharing information so that IT employees could understand how the situation emerged (for better or worse) helped to motivate them to meet customer demands. In addition to commenting on the openness and frequency of communication with their IT employees, supervisors also discussed preferred communication media. Though they acknowledged using multiple media (e.g., memos, e-mail, phone conferences), high-performing supervisors stressed the superiority and necessity of face-to-face communication. Employees also expressed a preference for face-to-face interaction, most often noting that it seemed more “personal.” Occasional face-to-face communication is particularly important for IT professionals who must work at a distance, for example, at client sites or in virtual teams (Davis & Bryant, 2003). Developing trust was an essential component of the relationship-building process. Consistent with extant research (e.g., Korsgaard, Brodt, & Whitener, 2002), supervisors stressed open communication, honesty, and follow through as key ingredients of trust building. Another key aspect of relationship building was socialization or “onboarding” of new IT employees. Supervisors expressed a preference for the serial socialization tactic (Van Maanen & Schein, 1979), in which new hires could be paired for a period of time with employees they would be replacing. High-performing supervisors

showed sensitivity to the needs of these new hires. For instance, they helped them navigate the more practical side of becoming a team member (e.g., completing paperwork for human resources, understanding policies and practices, familiarizing them with organisational and departmental resources). They also made sure that all new hires were introduced to other team members and often allowed a period of more lenient project deadlines while newcomers were adjusting.

3.8.10 Employee Exit

Organisation psychologists have long been interested in employee turnover. There are two major reasons why turnover is a central issue in the field of organisational psychology across the globe. First, turnover is related to low organisational knowledge, low employee morale, low customer satisfaction, high selection costs, and high training costs (Staw, 1980; TalentKeepers, 2004). Research has also shown that high employee turnover is related to lower organisation performance (Glebbeek & Bax, 2004; Huselid, 1995; Phillips, 1996). Second, the decision to turnover is often the final outcome of an individual's experiences in an organisation (Hom & Griffeth, 1995). Accordingly, many studies have used turnover as a criterion to evaluate the effectiveness of various organisational processes, such as selection (Barrick & Zimmerman, 2005; Meglino, Ravlin & DeNisi, 2000), training (Ganzach, Pazy, Ohayun & Brainin, 2002; Glance, Hogg & Huberman; Hequet, 1997), and coaching/ mentoring (Lankau & Scandura, 2002; Luthans & Peterson, 2003; Payne & Huffman, 2005). Thus, understanding the factors that influence turnover gives organisations the opportunity to reduce selection and training costs, increase employee morale and customer satisfaction, and enhance organisational productivity.

Exhibit 3.3. Examples of innovative practices for the fourteen HR practice categories

1	EMPLOYEE ACQUISITION STRATEGIES (e.g. greater importance to be attached to fit between person and company culture, emphasizing 'career' not 'job' and selling company image to attract potential employees, referral bonuses, sign on bonuses for new employees, psychological testing, developing industry academia interface, etc.)
2	EMPLOYEE RETENTION STRATEGIES (e.g. evolving a pleasant work environment, deferred compensation, competitive salaries, faster promotions, greater work autonomy, etc.)
3	COMPENSATION and INCENTIVES (e.g. increasing component of variable pay, stock options, combining individual and team incentives, performance-linked incentives, customization of perks to individual needs, offering a variety of allowances, conducting compensation surveys, etc.)
4	BENEFITS and SERVICES (e.g. focus on long-term benefits for employees through alternative insurance and health management schemes, giving benefits directed at employees' families, flexible employee benefits /cafeteria approach, child and elder care programmes, improvements in retirement benefits)
5	REWARDS and RECOGNITION (e.g. performance-linked rewards, flexible rewards, cash rewards for extraordinary performance, rewarding team performance, best employee awards, public recognition of good performance at a company meeting or function, recognition from co-workers, blend of financial and non-financial rewards)
6	TECHNICAL TRAINING (e.g. systematic training needs assessment, crossfunctional training, providing job relevant training, facilitating transfer of training to actual job performance, etc.)
7	MANAGEMENT DEVELOPMENT (MD) (e.g. linking MD to individual needs, linking MD to organisational objectives, using innovative MD methods, like stress management programmes, adventure training, leadership and attitudinal training, study leave, programmes for women managers, etc.)
8	CAREER PLANNING and DEVELOPMENT PRACTICES (e.g. developing career paths, providing fast-track career plans, providing mentors to employees, cross-functional career paths, participative career plans, career counselling, etc.)
9	PERFORMANCE APPRAISALS (e.g. giving weight to individual, team and organisational performance while appraising; using quantifiable criteria for appraisals; participative appraisals; open appraisals to increase transparency; giving appraisal feedback; linking rewards to appraisals, 360 ° appraisals, etc.)

10	POTENTIAL DEVELOPMENT: a company-wide MD programme (job rotations, use of assessment centres, coaching, conducting potential appraisals, etc.)
11	SUCCESSION PLANNING: MD programme aimed at filling specific position with one of the two potential candidates (e.g. identifying replacements, provision of fall-back positions in case of failure, preparing to assume higher responsibility, etc.)
12	EMPLOYEE RELATIONS WITH A HUMAN FACE: TREATING EMPLOYEES WITH CONCERN (e.g. information sharing, open and transparent communication, family get-togethers, humanizing work environment, respecting employees, ensuring fairness in management practices, encouraging risk-taking, etc.)
13	EMPLOYEE EXIT and SEPARATION MANAGEMENT (e.g. extending benefits to retirees for lifetime, retirement planning workshops for about-to-leave employees, conducting exit interviews, outplacement services, VRS, etc.)
14	ADOPTING RESPONSIBILITY FOR SOCIALLY RELEVANT ISSUES (e.g. adult education programmes, community development projects, concern for greening and environment protection, research promotion, etc)

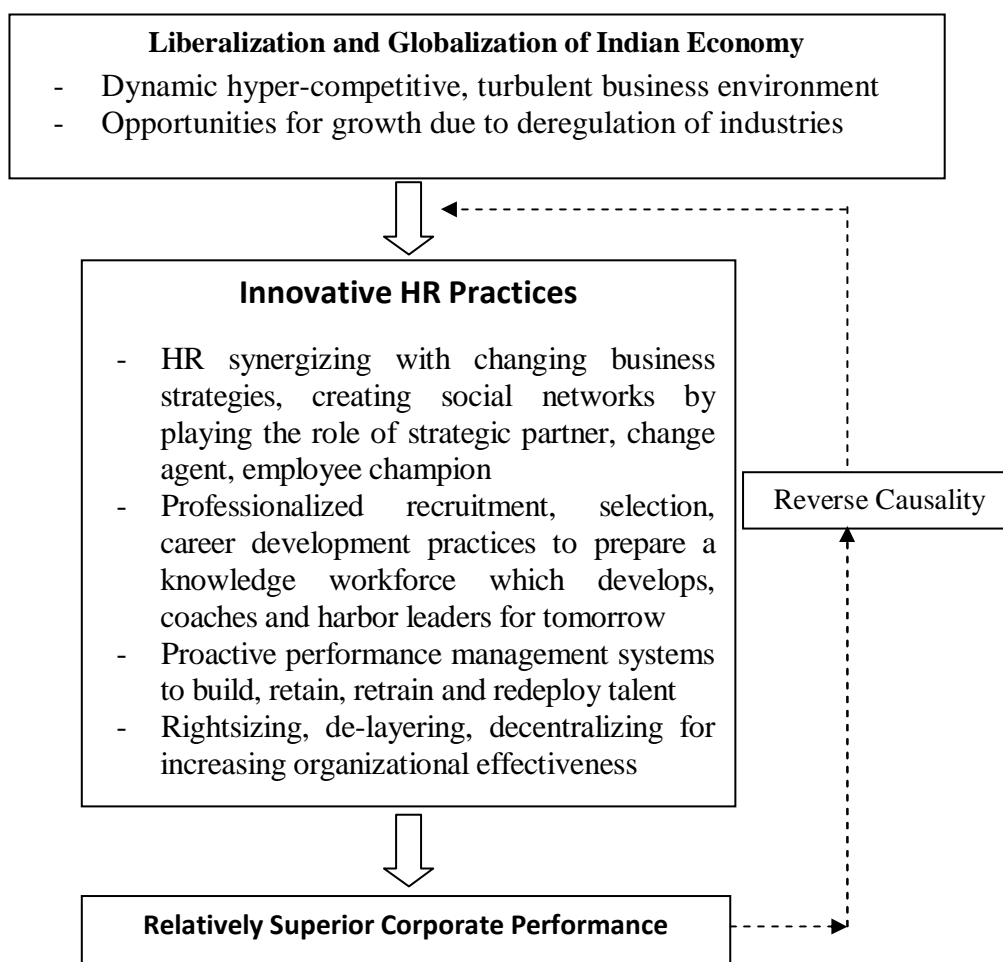
Source: Tanuja Agarwala, (2002). Innovative human resource practices and organisational commitment: an empirical investigation "International Journal of Human Resource Management pp. no.185-186

3.9 Innovative Human Resource Practices in India

Ashok Som (2009) based on the findings from the five case studies within the contexts of a developed economy and an emerging economy, it can be hypothesized that during environmental turbulence among organisations that undertook a change process, two dimensions – redesign mechanisms and innovative HRM practices - accounted for the variation in the success or otherwise of the change process. Changes in the environment are external to the firm, but the redesign mechanism and the innovative HRM practices that it adopts are internal choices of the organisation. How it aligns its redesign mechanism with its HR practices is a strategic choice of the organisation. In order to brace environmental change and be successful organisations have to effectively orchestrate redesign mechanism and innovative HRM practices.

The liberalization of the Indian economy created a dynamic business environment that has resulted in hyper-competition. In hyper-competitive environment, innovative HRM practices like any context- generablizable resource , have the potential to give and organisation a competitive advantage in a globalized market. Identification of these innovative HRM and redesign mechanisms is a critical factor for improving organisational performance Ashok Som (2009).

Exhibit 3.4. Contingency model of adoption of innovative HRM practices by Indian corporates in response to India’s economic liberalization



Source: Asok Som (2007); Bracing MNC Competition through Innovative HRM practices: The Way Ahead for Indian Firms pp. no.214.

3.9.1 Factors favouring IHRP implementation in India

The differences in the adoption of SHRM innovation can be attributed to external environmental conditions that often distinguish organisations from one industry to another (Kossek, 1987). In the post-liberalization India, these conditions are national environment, organisational restructuring, legitimizing, ownership structure and culture and role of HRM department.

3.9.2 National Environment for Innovative SHRM Adoption

“National Environment” refers to the influence possessed by aspects such as the institutional framework, culture and incentive structures for innovative practices. Recent research has suggested that national factors can have an impact on the type of innovative

SHRM practices adopted (Gooderham et al., 1999). In addition to SHRMs’ vulnerability to legislative changes, the function is also susceptible to changes in the socio-political landscape. Economic liberalization on the one hand intensifies competition by lowering barriers to entry and on the other opens up many opportunities for growth through removal of regulations and artificial barriers on pricing and output decisions, investments, scale economies, Mergers & Acquisitions, technology imports, joint ventures etc (Khandwalla 2002). Kossek (1987) postulates that external environmental forces such as unions, technological change and labor market conditions distinguish HRM innovation practices across industries.

3.10 Human Resource Management Innovation Implementation

Human resource management (HRM) innovation concerns new HRM ideas and practices that strive to add value to HRM and organisational performance (de Leede and Looise, 2005). Although it is becoming

increasingly popular, it remains expensive and often falls short of achieving the desired outcomes. Unique and truly valuable innovative HRM programmes can face conflicting priorities, uneven control of resources and diversity in the backgrounds of participants, and may fail as a result.

Contrasting the perceptions of different employee groups about innovative HRM programmes calls for careful implementation of intended HRM practices in the organisations. In some cases, as noted by Wright and Nishi (2006), this entails a massive transformation of the initial ideas, while in others it simply requires minor adaptations. Given this, it seems important to study the process of implementation of HRM innovations. In this paper, we follow Klein and Sorra (1996), where implementation is defined as a process of gaining targeted organisational members' appropriate and committed use of HRM innovation. The paper proceeds to show how the HRM frames of HR specialists and line managers in a real organisational setting influenced their attitudes and, based on this, their actions towards the HRM innovation.

The term implementation is given a variety of meanings in the literature, but conversely, in many studies, it is seen as an implicit term not requiring definition. In a broad sense, implementation is considered a period of organisational transition between the idea to introduce a particular innovation until its adoption by the targeted employees (Klein and Sorra, 1996). Ideally, the targeted organisational members should become skilful, consistent and committed in their use of a HRM innovation. By targeted organisational members, we mean those people who are expected to use the HRM innovation directly (the use of new HRM instruments by line managers, HR professionals and shop floor employees) or to support the innovation (top management and workforce) or to adapt to new HRM settings in an organisation. Given the growing interest in research into the process of HRM implementation, various

studies have attempted to demonstrate the distinction between intended, actual and perceived HRM practices (Mirvis, 1997; Wright and Nishi, 2006). We would echo Becker and Huselid's (2006) observation that clarity and operationalisation of HRM implementation are crucially important to accomplish business strategies.

If we define the success of HRM innovation implementation as the consistent, skilled working with the new HRM practices by the various groups of organisational members, then we should acknowledge that to do so, the various social groups should first achieve a consistent understanding of those practices. Such understandings, interpretations and assumptions are the initial inscription steps leading to HRM enactment and, thus, implementation. Successful implementation is a necessary but not sufficient condition for HRM innovation effectiveness: implementation is not a guarantee that the HRM innovation will bring benefits to an organisation. The literature suggests that innovation implementation may result in one of the three outcomes:

- 1) Implementation is successful, and its use enhances HRM performance;
- 2) Implementation is successful, but its use does not improve HRM performance; and
- 3) Implementation fails (Klein and Sorra, 1996).

It is argued that understanding people's interpretations of the HRM innovation is critical to understanding how they adopt it. To work in a new HRM situation or to make use of a HRM innovation, people have to make sense of it; and in this sense-making process they develop particular assumptions, knowledge and expectations that then shape subsequent actions toward it.

In a less, philosophical way, frames are defined as organized knowledge structures that allow individuals to interact with their environment (Mathieu et al., 2000, p. 274). A variety of terms has been used to express the idea of cognitive frames, such as beliefs, categories (Dutton and Jackson, 1987; Hodgkinson and Johnson, 1994), taxonomies (Porac and Thomas, 1989), mental models (Mathieu et al., 2000), cognitive maps (Cossette and Audet, 1992; Goodhew et al., 2005), cognitive frameworks (Bartunek and Moch, 1994) and scripts (Gioia, 1986; Lord and Kernan, 1987).

An understanding of how actors interpret an HRM innovation is critical in understanding their interactions with HRM. To interact with the HRM innovation, actors have to make sense of it and, in this sense-making process, they develop particular assumptions, expectations and knowledge of HRM, which then shape their subsequent interpretations of it. Even though these assumptions, interpretations and frames of reference are generally taken for granted and rarely studied or reflected upon, they nevertheless play an important role in influencing and structuring how people think and act towards HRM innovations. Frames are always interpretive, flexible and context-specific. As Lin and Silva (2005, p. 50) note, “Individuals who rely on the same frame to make sense of the same object, in different contexts, may arrive at different interpretations of and conclusions about the same object”. This means that it is impossible to establish a set of components of one’s HRM frame outside the context, or in advance.

By facilitating people’s decision making and problem-solving processes, frames allow them to explain the behaviour of the world around them, to recognize relationships between components, to construct expectations of what is likely to occur next, and to proactively shape the thinking process of others through sense-making and sense-giving processes (Gioia and Chittipeddi, 1991; Maitlis, 2005; Thomas et al., 1993). Hence, frames have three crucial

purposes: they help people to describe, to explain and to predict events in their environment (Mathieu et al., 2000).

3.10.1 HRM Frames of Line Managers and of HRM specialists

Based on studies of the involvement of line managers in HRM (Kulik and Perry, 2008; Renwick, 2003), we assume that line managers and HR specialists are unlikely to have identical perceptions and frames about HRM innovations in organisations. It is not difficult to imagine that HR specialists may have a long-term perspective on HRM innovation, expecting it to facilitate the business strategy and contribute to human capital development. Line managers, on the other hand, may anticipate extra work related to the introduction of new HRM policies, with HRM tasks being devolved from the HR specialists to them (Renwick, 2003).

Incongruence, on the other hand, indicates different, or even opposing, assumptions about key aspects of the HRM innovation.

The main lesson learnt from our study is that the concept of HRM frames holds explanatory power for the analysis of HRM implementation by different social groups in organisations. Simply put, line managers and HR professionals experience and see HRM from different angles and therefore appropriate HRM innovations differently. The second lesson is that frame congruence plays a crucial role in adopting HRM innovations by social groups. There are at least two levels of congruence that we observed in the case study. First, there is an “internal” congruence, showing similarities between HRM frames within one social group. It is significant that the internal congruence is oriented towards promoting a HRM innovation. Second, there is an “external” congruence of HRM frames – the one between social groups. The third lesson is that the domain of strategic motivation is crucially

important in the implementation of HRM innovation, and it should be viewed as a necessary and primary condition in the process of sense-giving and sense-making about HRM innovation. This frame domain will indicate the readiness of people to accept the HRM innovation. Initial assessment of the HRM frame in the strategic motivation of HRM innovation, its understanding across different social groups, will gear the implementation process forward. In this paper, we have proposed the concept of HRM frames for assessing HRM innovation implementations and suggested that people use such frames to manifest their attitudes and actions towards HRM innovations.

3.10.2 The challenge of HRM innovation implementation

The term implementation is given a variety of meanings in the literature, but conversely, in many studies, it is seen as an implicit term not requiring definition. According to Klein and Sorra, (1996), implementation is considered a period of organisational transition between the idea to introduce a particular innovation until its adoption by the targeted employees. Ideally, the targeted organisational members should become skilful, consistent and committed in their use of a HRM innovation. By targeted organisational members, it is meant that those people who are expected to use the HRM innovation directly (the use of new HRM instruments by line managers, or to support the innovation (top management and workforce) or to adapt to new HRM settings in an organisation.

Given the growing interest in research into the process of HRM implementation, various studies have attempted to demonstrate the distinction between intended, actual and perceived HRM practices (Mirvis, 1997; Wright and Nishi, 2006). These studies posit that HRM, as embedded practices created and introduced by HR policymakers and organisational leaders, becomes understood,

accepted and embodied by employees and line managers in organisations. The main challenge of HRM innovation implementation rests on the two-sided risk. On one hand, new HRM practices may threaten the comforting familiarity associated by organisational members (line managers and employees) with existing HRM policies and expectations (Wright and Nishi, 2006). On the other, new HRM practices may damage the reputation and intention of HRM because of possible discrepancies between intended and realized innovations.

Becker and Huselid (2006) observes that clarity and operationalisation of HRM implementation are crucially important to accomplish business strategies. Further, locating HRM strategy implementation between HRM and firm performance reflects the centrality of line managers in the process of enactment of HRM practices, and transfers a broader focus to the workforce management. If the success of HRM innovation implementation is defined as the consistent, skilled working with the new HRM practices by the various groups of organisational members, then it is to be acknowledged that to do so, the various social groups should first achieve a consistent understanding of those practices. Such understandings, interpretations and assumptions are the initial inscription steps leading to HRM enactment and, thus, implementation. Successful implementation is a necessary but not sufficient condition for HRM innovation effectiveness: implementation is not a guarantee that the HRM innovation will bring benefits to an organisation Bondarouk et al (2009). The literature suggests that innovation implementation may result in one of the three outcomes:

- 1) Implementation is successful, and its use enhances HRM performance;
- 2) Implementation is successful, but its use does not improve HRM performance; and
- 3) Implementation fails (Klein and Sorra, 1996).

Bondarouk et al (2009) argues that understanding people's interpretations of the HRM innovation is critical to understanding how they adopt it. To work in a new HRM situation or to make use of a HRM innovation, people have to make sense of it; and in this sense-making process they develop particular assumptions, knowledge and expectations that then shape subsequent actions toward it.

3.10.3 Implementation of HRM Innovations through the theoretical lens of cognitive frames

The implementation of HRM innovation could be considered through the theoretical lens of cognitive frames. Cognitive psychologists argue that such social constructs as mental frames represent subjective data, and they act as a tool to facilitate decision making, problem solving and negotiating within the context of organisational intervention (Cossette and Audet, 1992). The managerial literature shows that, ultimately, it is the actors' perceptions of organisational processes, filtered through existing mental frames, which form the basis for the formulation and interpretation of organisational issues (Hodgkinson, 1997), that people act on the basis of their interpretations of the world (cognitive frames) and, in so doing, they enact particular social realities through giving them meaning (Bartunek and Moch, 1994; van Gestel and Nyberg, 2009; Weick et al., 2005). Interpretations of reality are seen to preclude and challenge the processing of information through sense-making and sense-giving processes when people face new actions and interpret and communicate their thoughts about them

3.10.4 Frames for HRM innovation implementation

The concept of "frames" comes from cognitive psychology (Bandura, 1986), and it has been described as a "repertoire of tacit knowledge that is used to impose structure upon, and impart meaning to, otherwise ambiguous

social and situational information to facilitate understanding” (Gioia, 1986). In a less, philosophical way, frames are defined as organised knowledge structures that allow individuals to interact with their environment (Mathieu et al., 2000). A variety of terms has been used to express the idea of cognitive frames, such as beliefs, categories (Dutton and Jackson, 1987; Hodgkinson and Johnson, 1994), taxonomies (Porac and Thomas, 1989), mental models (Mathieu et al., 2000), cognitive maps (Cossette and Audet, 1992; Goodhew et al., 2005), cognitive frameworks (Bartunek and Moch, 1994) and scripts (Gioia, 1986; Lord and Kernan, 1987).

An understanding of how actors interpret an HRM innovation is critical in understanding their interactions with HRM. To interact with the HRM innovation, actors have to make sense of it and, in this sense-making process, they develop particular assumptions, expectations and knowledge of HRM, which then shape their subsequent interpretations of it. Even though these assumptions, interpretations and frames of reference are generally taken for granted and rarely studied or reflected upon, they nevertheless play an important role in influencing and structuring how people think and act towards HRM innovations. Frames are always interpretive, flexible and context-specific. As Lin and Silva (2005) note, “individuals who rely on the same frame to make sense of the same object, in different contexts, may arrive at different interpretations of and conclusions about the same object”. This means that it is impossible to establish a set of components of one’s HRM frame outside the context, or in advance.

HRM frames are defined by Bondarouk et al (2009) as:

a subset of cognitive frames that people use to understand HRM in organisations. They can be conceptualised as interpretive schemes related to design, policymaking and working with HRM. That is, HRM frames are

stocks of knowledge which people draw upon to communicate meanings and attitudes in their actions and interactions linked to HRM. HRM frames are presumed to facilitate information processing, and thus, sense-making. Frames are functional in that they allow employees to deal with a vast amount of information quickly and efficiently, and utilise prior experience and knowledge in their interpretations (Lord and Foti, 1986). Frames represent subjective data, and they act as a tool to facilitate decision making, problem solving and negotiating within the context of organisational intervention (Cossette and Audet, 1992). By facilitating people's decision making and problem-solving processes, frames allow them to explain the behaviour of the world around them, to recognize relationships between components, to construct expectations of what is likely to occur next, and to proactively shape the thinking process of others through sense-making and sense-giving processes (Gioia and Chittipeddi, 1991; Maitlis, 2005; Thomas et al., 1993). Hence, frames have three crucial purposes: they help people to describe, to explain and to predict events in their environment (Mathieu et al., 1996)

According to Bondarouk et al (2009) four HRM frame domains exist: strategic motivation, essence of HRM innovation, HRM innovation-in-practice and ownership. Where the HRM frames are significantly different, difficulties and conflicts in HRM innovation implementation are observed. Empirical findings illustrated how the nature, value and reasons behind the HRM innovation are interpreted by HR specialists and line managers, and that incongruent frames resulted in outcomes that deviated from those expected. The concept of HRM frames for assessing HRM innovation implementations suggested that people use such frames to manifest their attitudes and actions towards HRM innovations. The various HRM frames surrounding HRM innovation imply different ways of knowing and interpreting HRM and thus may influence the implementation

process. As certain frames may only be implicit and not discussed, this may, result in unexpected and unintended misaligned assumptions, contradictory to the desired HRM policies. By articulating the shared understandings about HRM innovations in organisations, the frames concept offers a number of contributions to HRM research and practice.

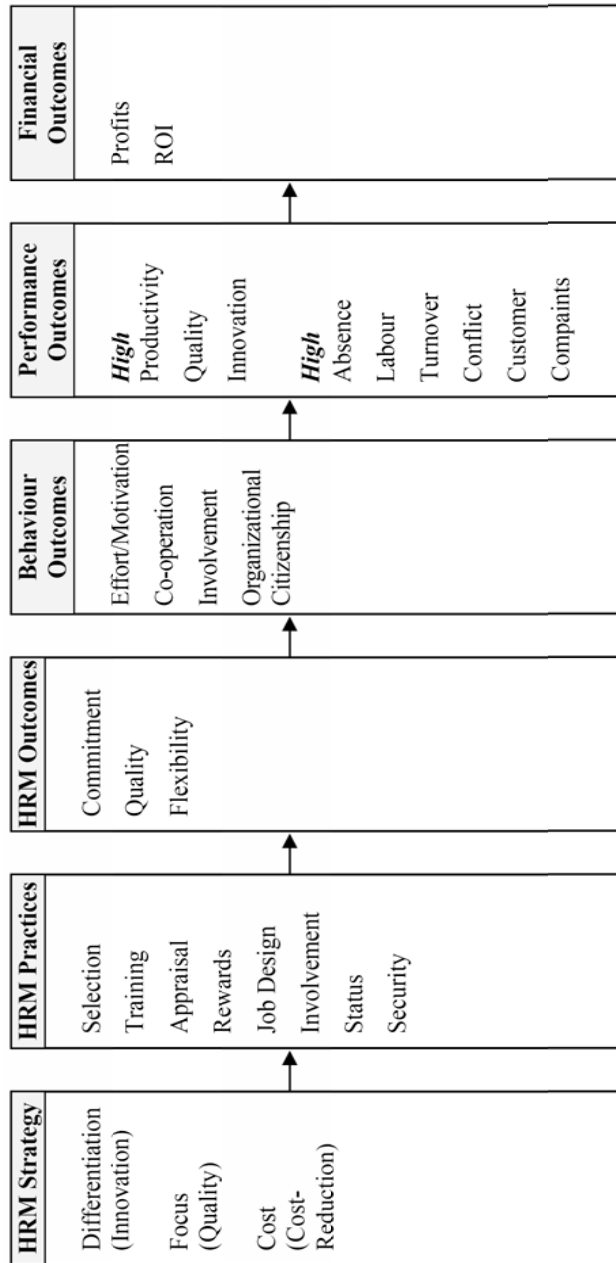
3.11 Relationship with HRM and Performance

One critical question in HRM research that has garnered considerable attention is how much difference HRM can make in organisational functions and for organisational performance. Though it is a critical endeavor to examine the relationship between HR practices and systems with performance, the domain of research is fairly muddled. One of the primary reasons for this is that the choice of performance measures used in research studies varies widely. In particular, researchers have drawn from a wide array of performance measures that vary in terms of (1) their proximity to employee contributions or the level of aggregation in which they are measured, and (2) the relevant stakeholder group of focus. Human resource management (HRM) innovation concerns new HRM ideas and practices that strive to add value to HRM and organisational performance (de Leedeand Looise, 2005). Although it is becoming increasingly popular, it remains expensive and often falls short of achieving the desired outcomes. Large-scale HRM innovation projects in particular are complicated and require significant collaboration among disparate organisational members who bring varied experiences, interests and objectives to such projects. Unique and truly valuable innovative HRM programmes can face conflicting priorities, uneven control of resources and diversity in the backgrounds of participants, and may fail as a result. empirical research has suggested that HR practices have positive effects on employees and company performance (Delery and Doty,1996;Huselid,1995)When firms

apply HR practices that respond to their external environment and leverage internal capabilities, they can achieve superior performance (Huselid,1995)

The measurement of HR effectiveness and impact was the number one topic that HR executives were most interested in exploring, observed Yeung and Berman (1997). But most HR evaluation approaches have been unable to deliver objective data showing the unique contribution of the HR function to organisational effectiveness (Phillips, 1992), there is mounting empirical evidence linking HR practices with various measures of firm performance (Huselid et al., 1997; Venkataratnam, 1997). However, literature on the relationship of innovative human resource practices and organisational performance still remains sparse. Given the importance of the HRM function to organisational competitiveness, successful HRM innovations can be important determinants of organisational success. The earliest study on IHRPs was done by Schuster (1986), who reported that the greater the number of innovative practices, the more people-oriented the management philosophy and more effective the organisation. Other studies have also reported a relationship between progressive/sophisticated HR practices and various measures of firm performance (Hiltrop, 1996, 1999; Stroh and Caliguiri, 1998; Varma et al., 1999). According to Hiltrop (1996), these results do not prove that innovative or progressive HR practices cause better financial performance but only that the two may be related. Huselid's (1994) view was that the relationship between HR practices and firm performance does not make it clear whether sophisticated HR practices caused the higher performance or if higher-performing organisations chose to invest in more sophisticated HRM practices. However, the evidence, according to Hiltrop (1996), is consistent with the view that the HR practices of an organisation have a powerful influence in motivating employees to exhibit the kinds of attitudes and behavior that are needed to support and implement the competitive strategy of an organisation.

Exhibit 3.5. Linking HRM and Performance



Source: David E. Guest (1997); Human Resource Management and Performance: a review and research agenda. International Journal of Human Resource Management. pp. no. 146.

3.11.1 Stakeholder groups

Hitt, Ireland, and Hoskisson (2005) suggest that there exist three primary groups of stakeholders that exert distinct pressures on organisations and are directly impacted by the performance of organisations. First, companies must attend to the needs of capital market stakeholders – shareholders and major suppliers of capital such as banks. Second, companies must consider the needs and demands of product market stakeholders – the primary customers, suppliers, unions, and host communities with whom organisations conduct business. Finally, companies must also consider the needs of organisational stakeholders, the employees and managers within the organisation. In line with the stakeholder framework, Rogers and Wright (1998) proposed a Performance Information Market (PIM) system which includes four major markets that allow different stakeholders (in a broad sense) to evaluate organisational performance: (1) the financial market; (2) the labor market; (3) the consumer (product) market; and (4) the political (social) market. The stakeholder group that has traditionally been of primary interest in the strategic HRM literature has been the capital market stakeholders. For example, Rogers and Wright (1998) reviewed 59 studies that examined the relationship between HR and various organisational outcomes and revealed that only two of the studies used employee outcomes such as turnover as the outcome of interest. Unfortunately, the importance of designing HR practices that address the concerns of multiple stakeholders is not widely acknowledged in HR research (Boselie, Dietz, & Boon, 2005; Schuler & Jackson, 2005). One implication of this focus on capital market performance measures is that it tends to ignore the importance of other potential stakeholder groups, as well as other potential types of performance measures. One implication of this focus on capital market performance measures is that it tends to ignore the importance of other potential stakeholder groups, as well as other potential types of performance measures.

3.11.2 Product - market stakeholders and outcomes

One area of research that has specifically considered the impact of HR initiatives on product market stakeholders is ‘climate for service’ research. In this research stream, customer satisfaction is treated as a mediating variable between HR practices and business performance and it is slightly different from more traditional strategic HRM research by its focus on the customer as the main outcome of interest. In general, climate can be defined as the employees' perceptions of the routines and rewards that characterize a setting (Schneider & Reichers, 1990) and can be understood as the immediate environment surrounding the individuals when they enter an organisation. Climate research generally has a strategic target or focus of interest such as service, justice, or safety, and attempts to identify those elements of the work environment – as described by employees – that correlate, or link, to critically important organisational outcomes such as customer satisfaction (Lepak et al., in press). Studies that indicate a significant and positive relationship between how favorably members of an organisation describe their organisational environment and customer satisfaction levels are numerous.

In their review of this literature, Wiley and Brooks (2000) reported that various dimensions of work climate, such as customer orientation, quality emphasis, teamwork/cooperation, and involvement/empowerment have been found to correlate with overall customer satisfaction. Such dimensions of climate are certainly related to HR practices.

Since product-market stakeholders are those stakeholders that are positioned outside the organisation, unions may be one of the stakeholders that belong to this group (Hitt et al., 2005). According to the industrial relations framework, collective forms of employee representation, such as unions, are the most efficient ones for promoting industrial democracy. Freeman and

Medoff (1979), there are two fundamentally different views of unions and their relationship with organisational outcomes. According to the collective-voice view, unions uphold the interests of employees, shareholders, and society by improving communication between managers and workers, collecting information concerning the preferences of workers, enhancing productivity, as well as reducing pay inequality among workers, and represent the political interests of lower income and disadvantaged people. According to the monopolistic view, union raises wages above competitive levels, reduces productivity, destructs society's productivity through frequent strikes, and fights for their own interests in the political arena. These two faces of unionism place unions in a controversial position within the stakeholder theory: do unions sacrifice the business and societal interests for their own, or do unions contribute to advance these interests all together.

3.11.3 Organisational stakeholders and outcomes

There are several research domains that have paid more attention to organisational stakeholders – in particular, employees as a stakeholder group. On the one hand, there is a long history in traditional HRM research that examines the impact of various HR practices and activities on employee outcomes. A large volume of research has accumulated in this area over the years examining the impact of single HR practices such as selection (e.g. Barrick, Patton, & Haugland, 2000), training and development (e.g. Frayne & Geringer, 2000), recruitment (e.g. Phillips, 1998), compensation (e.g. Rynes & Bono, 2000), and performance management (e.g. Welbourne, Johnson, & Erez, 1998) on individual level outcomes. Although there is considerable emphasis even within this research stream on the outcome of job performance (Wright & Boswell, 2002), researchers have also investigated the impact of these practices on more employee-focused outcomes such as job satisfaction (e.g.

Seibert et al., 2004), motivation, socialization (e.g. Klein & Weaver, 2000), career success (e.g. Janasz, Sullivan, & Whiting, 2003), and occupational safety (Zacharatos, Barling, & Iverson, 2005). An emphasis on such employee-focused outcomes takes into account the importance of meeting the needs and interests of employees as major stakeholders in the organisation. A secondary stream that has focused on employees is the industrial relations (IR) paradigm. IR research focuses on the employee as the main stakeholder of interest. One of the main differences between IR research and strategic HRM research is that while strategic HRM approaches the study of work and employment from the employer's perspective, implicitly taking into account the shareholders' or capital market perspective, industrial relations research approaches the same topic from the employee's standpoint (Kaufman, 2001).

Researchers mostly agree that HRM systems, rather than single HRM practices have an impact on organisational outcomes (Becker & Huselid, 1998; Huselid, 1995; Ichniowski, Shaw, & Prennushi, 1997). Despite some variation across studies as to which practices should be considered, researchers mostly agree that practices such as selective staffing, intensive training and development programs, employee involvement, and job security should be among them (Arthur, 1994; Huselid, 1995; MacDuffie, 1995). Strategic HRM research is also consistent in terms of its treatment of higher-level contingency variables such as strategy, industry or developmental stage of an organisation as critical factors that influence the use and effectiveness of HR systems (Jackson, Schuler, & Rivero, 1989; Baird & Meshoulam, 1988). While strategic HRM research has made considerable progress in these areas, researchers have not paid equal attention to defining and refining the outcome construct of interest, namely 'performance'. Performance varies by how proximal it is to the intended impact of HR practices, the level at which it is aggregated, and by the stakeholder groups whose interests

are met. Strategic HRM researchers need to think about workforce management on a global scale and from multiple stakeholders' perspective, taking into account the diversity of interests between and within stakeholder groups. Considering multiple stakeholders in strategic HRM is a worthy endeavor, but not without its challenges. By definition, stakeholders have diverse and potentially conflicting interests. Shareholders want to have larger profits; customers look for high quality products and services with low price tags and employees desire a meaningful job in which their earnings are in line with their perceived contribution. Moreover, society expects corporations to be socially responsible by considering the needs of the local communities in which they operate. Organisations who score high on financial performance metrics may not be doing equally well on other types of metrics that focus on other stakeholders.

3.12 Indian Studies on HRM to Firm Performance

A considerable amount of interest has since gained ground on understanding the link between HRM and performance in the Indian context (Budhwar and Sparrow 1997; Budhwar and Boyne 2004; Singh 2003; Amba – Rao et al. 2000; Paul and Anantharaman 2003). With a relatively large questionnaire survey of 137 companies. Budhwar and Sparrow (1997) analysed the levels of integration of HRM in corporate strategy and development of responsibility for HRM to line managers in India.

Singh (2003), from his survey of 84 companies, found a significant relationship between strategic HR orientation index and firm performance. Amba Rao et al. (2000) in their empirical study, compared performance appraisal practices and management values among foreign and domestic firms in India. They found that managers have to adapt selectively to firms in India. They found that managers have to adapt selectively to firms depending on the basis of a firm's ownership structure.

Paul and Anantharaman (2003) in their study of 35 Indian software companies determined and tested a casual model linking HRM with organisational performance through an intervening process. They observed that not a single HRM practice had a direct casual connection with organisational financial performance, through HRM practice had a direct casual connection with organisational financial performance, through HRM practices had an indirect influence on the operational and financial performance of the organisation. In their comparative study of 137 large manufacturing firms, Budhwar and Boyne (2004) differentiated the HR practices in both public and private sector companies in India. Their findings suggested that against the established notion, the gap between the Indian private and public sector HRM practices (structure of HR department, role of HR in corporate change, recruitment and selection, pay and benefits training and development, employee relation, and key HRM strategies) is not very significant. But in a few functional areas (compensation, and training and development) private sector firms have adopted a more rational approach than their public sector counterparts). All these studies concluded that in the context of India's post liberalization scenario strategic HRM practices may enhance reinforce and sustain organisational performance.

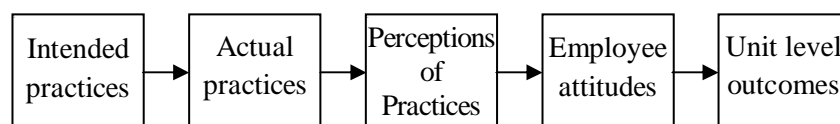
3.13 Human Resource Practices and Human Resource Outcomes

Employee responses to HR practices are at the heart of all HRM-performance models (Purcell and Kinnie, 2006) because it is the link between employee reactions and their subsequent behaviour which is critical. Employee reactions are usually subdivided into those concerning affective or attitudinal outcomes like job satisfaction and organisational commitment, those building cognitive skills and those affecting behaviour seen in discretionary behaviour and task behaviour.

This focuses attention on the need to include in the research specification assessments on levels of organisational commitment, especially affective rather than continuance commitment, and job satisfaction. Appelbaum et al. (2000) and Purcell et al. (2003) separate behaviour from attitudinal components (commitment and job satisfaction) because discretionary behaviour both on the job and off the job (Adler et al., 1999) is the critical factor in linking employee responses to performance and is different from performance improvements coming via better knowledge, skill and ability.

The central premise or assumption is that ‘Innovative HR practices are viewed by employees as a “personalized” commitment to them by the organisation which is then reciprocated back to the organisation by employees through positive attitudes and behaviour’.

Exhibit 3.6. The people management–performance causal chain



Source : Purcell and Kinnie, (2006) HRM and Business performance: Oxford University Press. pp. no. 108

The model (exhibit 3.6) takes this into account and also seeks to clarify the distinction between policies, practices and employees’ experiences of them. Intended practices are those HR policies designed by the organisation to contribute to the achievement of business strategy and meet tenets of social legitimacy (Boxall and Purcell, 2003). Actual practices are those HR practices that are implemented and the method or style of leadership behaviour as part of people management. It is these practices and the way they are implemented in people management that employees perceive and react to. Each HR practice and the way it is applied will have a functional purpose and employees can

judge each in terms of utility or satisfaction to them as well meeting standards of fairness or legitimacy. But taken together people management has a non-instrumental role of communicating to employees the nature of the firm, their value to it and the type of behaviours expected. Thus, the group or bundle of people management practices as perceived by employees constitute an important element in overall organisational climate (Bowen and Ostroff, 2004) and have causal powers different from the functional purpose of each practice. Employee reactions are typically assessed attitudinally in levels of job satisfaction and affective organisational commitment. Employee outcomes are observable responses seen in task behaviour, discretionary behaviour as a form of OCB and attendance (or turnover and absence). It is these behaviours which influence organisational effectiveness, however defined, and ultimately, firm financial or economic performance (see Ostroff and Bowen, 2000; Gerhart, 2005; Fulmer et al., 2003 for evidence).

The link between employees' experience of actual people management and their attitudes towards the firm, seen in affective commitment, is suggested by social exchange theory. Here, employees' Perceived Organisational Support (POS) embodied in HR practices applied or open to them is reciprocated by higher OCB and retention/attendance (Eisenberger et al., 2002). The central assumption is that 'HRM practices are viewed by employees as a "personalized" commitment to them by the organisation which is then reciprocated back to the organisation by employees through positive attitudes and behaviour' (Hannah and Iverson, 2004: 339). POS may be linked to particular policies of salience to employees, but it is the overall effect, the 'strength' of the HR system (Bowen and Ostroff, 2004), and employees' broader conceptions of the employment relationship which is critical (Hannah and Iverson, 2004: 338).

These practices have to exist, initially as policies, to be applied. Taken together, the whole bundle of practices can be judged as the ‘strength of the HRM system’ to use Bowen and Ostroff’s (2004: 209) term. They suggest that ‘a strong HRM system coupled with a visible supervisor may foster stronger relationships among HRM climate and performance’ more than either by itself. This suggests that employee satisfaction with HR practices as a whole influences affective organisation commitment and job experiences. Further, that satisfaction with HR practices will foster a stronger relationship with employee attitudes to their job and their organisation than either by itself.

Earlier research on the HRM and performance link which focused exclusively on a count of HR policies in place and the proportion of employees covered by such policies had the danger of giving an erroneous impression that it was the number and mix of policies that was important. Once the model of the causal chain is proposed hypothesizing the steps between intended practices and performance outcomes, it is clear that the crucial link is between the employee experiences of people management, the formation or modification of attitudes towards the employing organisation and the job and the inducement these provide to engage in certain types of discretionary behaviour.

3.14 Innovative HR Practices and its relationship to HR Outcomes

Innovative HR practices were proposed by (Arnett and Obert 1995; Dessler 1999; Pfeffer and Veiga 1999) to enhance effectiveness in organisations and to retain talented employees in the organisation. A conceptual model formulated by Lawler (1986) is a starting point to define these practices. He suggests four organisational practices which are said to influence work related attitudes and behaviours, namely information sharing, empowerment, competence development and reward. Later studies on the

same by (Milkovich and Newman 1998; Sheppard et al. 1992) have expanded it to seven practices. First, for most IT professionals, a significant part of their motivation comes from the recognition they get from managers for an outstanding job (Agarwal and Ferratt 1999; Gomolski 2000). Non-monetary recognition practices are the means by which an organisation tangibly signals its appreciation of the accomplishments of individuals. Examples of such practices are extended vacations, tickets to a baseball game, and organisational recognition events. Second, Agarwal and Ferratt found that successful IT organisations devote resources toward empowering IT professionals to take additional responsibilities. Third, it is easier to recruit and retain people in an organisation where IT professionals have a sense of equity. Specifically, there is a distinction between distributive and procedural justice. Distributive justice refers to the perceived equity with regard to issues such as mandates and compensation while procedural justice relates to the perceived equity with regard to the rules and procedures in place to determine these very same issues. Fourth, competence development practices (e.g., job rotation programs, mentoring, and training) convey to the employees that the organisation considers human resources to be a competitive advantage (Schwochau et al. 1997), and that it is seeking to establish a long-term relationship with employees (Tsui et al. 1995). That signal is likely to be an important factor in retaining productive IT professionals (Agarwal and Ferratt 1999; Guptill 1998). Fifth, with the shortfall of IT staff not expected to disappear in the near term, it is a sensible business practice to accommodate those employees who may not join the workforce for a typical nine-to-five workday because of other constraints in their personal life (Agarwal and Ferratt 1999). Here, work-life policies correspond to such support (e.g., flexitime work arrangements) provided by organisations to take into account the needs of the IT workforce and to minimize the consequences of conflict between the work and family issues. Last, IT professionals need to be made aware of the larger context

within which their work fits and to develop a sense of community (Agarwal and Ferratt 1999). One path to accomplish this is through information sharing practices (e.g., group meetings to discuss timely issues) which aim at clarifying the expectations of the organisation along with efforts made by the organisation to listen to preoccupations and employee suggestions.

The substantial volume of research on the link between HRM and organisational performance in the last 15 years has paid little attention to the causal chain linking policy inputs to performance outcomes (Boselie et al., 2005). In this 'HRM black box' the critical link is how HR practices influence employee attitudes and improve worker performance in ways which are beneficial to the employing organisation. This requires research using surveys of employees, or other methods, focusing on their perceptions of HR practices and establishing correlations with their commitment to the organisation and their job satisfaction. This is then related in the causal model to employee discretionary behaviour, sometimes referred to as organisational citizenship behaviour (OCB). While some HR policies may impact on employees directly, most rely on line manager action or support, and the quality of the relationship between employees and their immediate line managers is liable, too, to influence perceptions not only of HR practices but of work climate, either positively or negatively. The extent and nature of this discretionary behaviour will be influenced by the design and range of HR practices they are expected to implement. Where an extensive range of HR policies exist and are well known, managers are provided with the tools, techniques and procedures to use in people management. These then can be expected to modify or influence the relationship between managers and their subordinates. Employee commitment to the organisation will be influenced by their perceptions of these practices as well as their relationship with their managers.

This focuses attention on the need to include in the research specification assessments on levels of organisational commitment, especially affective rather than continuance commitment, and job satisfaction. Appelbaum et al. (2000) and Purcell et al. (2003). It is better to separate behaviour from attitudinal components (commitment and job satisfaction) because discretionary behaviour both on the job and off the job (Adler et al., 1999) is the critical factor in linking employee responses to performance and is different from performance improvements coming via better knowledge, skill and ability.

Actual practices are those IHRP that are implemented and are satisfied by the employees. It is these practices and the way they are implemented in people management that employees perceive and react to. Each IHR practice and the way it is applied will have a functional purpose and employees can judge each in terms of utility or satisfaction to them as well meeting standards of fairness or legitimacy. The group or bundle of IHRP as perceived by employees constitute an important element in overall organisational climate (Bowen and Ostroff, 2004) and have causal powers different from the functional purpose of each practice.

Employee reactions are typically assessed attitudinally in levels of job satisfaction and affective organisational commitment. Employee outcomes are observable responses seen in task behaviour, discretionary behaviour as a form of OCB and attendance (or turnover and absence). It is these behaviours which influence organisational effectiveness, however defined, and ultimately, firm financial or economic performance (see Ostroff and Bowen, 2000; Gerhart, 2005; Fulmer et al., 2003 for evidence).

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and retention/ attendance (Eisenberger et al., 2002). The central assumption is that 'HRM practices are viewed by employees as a "personalized" commitment to them by the organisation which is then reciprocated back to the organisation by employees through positive attitudes and behaviour' (Hannah and Iverson, 2004: 339). A possible unwholesome practice by a management to tide over a seemingly critical situation in the organization, though termed as 'innovative' by its proponents, once revealed would fail to generate the expected positive reciprocation from the employees and would not live up to IHRP in the context of the line of thought. POS may be linked to particular policies of salience to employees, but it is the overall effect, the 'strength' of the HR system (Bowen and Ostroff, 2004), and employees' broader conceptions of the employment relationship which is critical (Hannah and Iverson, 2004: 338).

Taken together, the whole bundle of practices can be judged as the 'strength of the HRM system' to use Bowen and Ostroffs (2004: 209) term. They suggest that 'a strong HRM system may foster stronger relationships among HRM climate and performance' more than either by itself. The satisfaction with IHR practices will foster a stronger relationship with employee attitudes to their job and their organisation than either by itself. The study seeks to test these propositions.

Earlier research on the HRM and performance link which focused exclusively on a count of HR policies in place and the proportion of employees covered by such policies had the danger of giving an erroneous impression that it was the number and mix of policies that was important. Once the model of the causal chain is proposed hypothesising the steps between intended practices and performance outcomes, it is clear that the crucial link is between the employee experiences of IHR Practices, the formation or modification of attitudes towards

the employing organisation and the job and the inducement these provide to engage in certain types of discretionary behaviour.

3.14.1 Proximal versus distal HR measures

HRM researchers have varied in the level of analysis of the performance measures they emphasized. While traditional HRM research has generally focused on individual level outcomes such as job performance (e.g. Wright & Boswell, 2002), job satisfaction (e.g. Seibert, Silver, & Randolph, 2004), and motivation, strategic HRM research has focused on unit or firm level outcomes related to labor productivity (Huselid, 1995; Koch & McGrath, 1996; MacDuffie, 1995) scrap rate (Arthur, 1994), sales growth (Batt, 2002; Guthrie, 2001), return on assets (ROA) and return on investment (ROI) (Delery & Doty, 1996), and market-based performance (Huselid, 1995). These aggregate level outcomes can further be differentiated by department level, plant (site) level, business unit level, and firm (corporate) level performance measures (Rogers & Wright, 1998). Dyer and Reeves (1995) suggested that HR practices have their most immediate impact on employees since employee outcomes such as turnover, absenteeism, job satisfaction, commitment, and motivation are in a closer line of sight to HR practices. They propose that HR practices also have the strongest effect on such employee outcomes, as these outcomes are to some extent the initial goal for designing the HR practices. The second category of organisational performance which is more distal to HR practices than individual level employee outcomes includes more macro level outcomes associated with aggregates of individual efforts, such as indicators of productivity, quality of products and customer service. The third category of performance noted by Dyer and Reeves (1995) encompasses financial and accounting outcomes, such as ROA, ROI, and profitability. Finally, the most distal performance measure to HR practices is the capital market outcome, such as stock price, growth, and returns While some researchers have

suggested that more proximal or intermediate outcomes may be a more appropriate level for HR research (Arthur, 1994; Delery & Doty, 1996; MacDuffie, 1995), the focal interest of many strategic HR studies has been placed on firm or corporate performance (Huselid & Becker, 1998; Rogers & Wright, 1998). Becker and Gerhart (1996) argue that corporate market measures of financial performance are particularly meaningful and Becker and Huselid (1995) identified the advantage of focusing on the corporate level of analysis of performance when they stated that corporate performance is the “raison d’etre” of strategic HRM research because HR policies and systems can be tied to meaningful performance data such as market performance and accounting measures of performance (e.g., sales, ROA, ROE, ROI). Moreover, because many corporations are required to report these data, researchers may be able to access relevant performance measures from a secondary source of data. These are certainly advantages for reducing common method bias concerns and increasing practical applicability of study results (Lepak, Liao, Chung, & Harden, in press). Although corporate or firm level performance metrics are important to examine, it cannot be drawn that certain outcomes are definitely more important than others. First, corporate performance measures may be viewed as quite distal from HR practices and likely to be influenced by more proximal performance measures related to HR initiatives.

From the review of literature it was decided to study the proximal outcomes of innovative HR practices like job satisfaction, organisational commitment and organisational citizenship behaviour.

3.14.2 Job Satisfaction

Job satisfaction is one of the most prominent correlates of Innovative HR Practices (Bateman & Organ, 1983, Puffer, 1987, Organ & Konovsky, 1989). It inculcates in employees a positive state of mind (Smith, 1983) which

in turn motivates them to repay their organisation through OC (Schnake et. al., 2003). Implicit in the cause of OC as argued by Smith et al. (1983) is the existence of some baseline of satisfaction required to trigger altruistic behaviours in the organisation. Positive beneficial actions directed at employees by the organisation create an impetus for employees to reciprocate in positive ways through their attitudes and/or behaviours (Coyle, Kessler, Purcell, 2004). Smith, Organ and Near (1983) have found that satisfaction, ie job satisfaction has a direct effect on citizenship behaviour.

Morrison (1994) utilizes an individual's conceptualization of their job as the basis for explaining OCB. He further writes that employees engage in OCB because these behaviours are viewed as a part of an individual's job. Pond et al. (1997) argue that employees engage in OCB because these behaviours are viewed as being directly rewarded. Instances where wider responsibilities are assigned to an employee, she/he is more likely to engage in OCB (Coyle - Shapiro et al., 2004). Social exchange theory suggests a comprehensive explanation of extra effort. It proposes that workers seek and maintain relationships that promise to offer higher rewards for their contribution. Moreover extra effort and desire to stay coupled with satisfaction lead to citizenship behaviours (Benkhoff, 1997).

Studies have revealed that a significant relationship exists between job satisfaction and IHRP (Organ and Lingl, 1995). In addition to this, job involvement, organisational trust and perceived needs were also said to be strongly related to IHRP. Bateman and Organ found that job satisfaction as measured by the Job Descriptive Index did correlate with the extent of IHRP as independently rated by supervisors. Task groups characterized by reciprocal interdependence display more citizenship behaviour than groups where sequential dependence is the rule (Smith, Organ, Near, 1983).

3.14.3 Organisational commitment

Organisational commitment (OC) is defined as the relative strength of an individual's identification with and involvement in an organisation. Empirical research reports support the relationship between organisational commitment and OCB (Carson & Carson, 1998). Organ and Konovsky (1989) suggest that good citizenship behaviour is an essential function of fair treatment by the organisation. Further to it William and Anderson (1991) found that perceptions associated with managerial and co-worker behaviours, advancement opportunities and on-the-whole work culture were strong antecedents of OCB. An individual's perception of the commitment that exists in their relationship with the organisation is positively associated with an employees' willingness to reciprocate by engaging in OCB and is also positively related to the broadening of job boundaries to include citizenship type behaviours. Meyer and Allen (1997) say that employees with a strong personal attachment and identification to the company continue employment. This is called affective commitment. Other factors which foster commitment are obligation due to social pressures i.e., continuance commitment, and associated costs with leaving the organisation i.e. normative commitment. Research studies by Igbaria and Guimaraes (1992) show a negative relationship between affective commitment and turnover intentions. Salary has been found to be positively related to organisational commitment (Igbaria & Greenhaus, 1992). In this study, the three-dimensional construct of organisational commitment developed by Meyer and Allen, 1991 has been used. The three components of organisational commitment are affective, continuance and normative commitment. They are best viewed as disguisable components, rather than types, of attitudinal commitment; that is, employees can experience each of these psychological states to varying degrees. Some employee, for example, might feel

both a strong need and a strong obligation to remain, but no desire to do so; others might feel neither a need nor obligation but a strong desire, and so on.

3.14.4 Organisational Citizenship Behaviour (OCB)

Organisational Citizenship Behaviour (OCB) consists of behaviour which is neither described nor prescribed by the organisation; a common set of performance standards for rating organisational citizenship behaviour does not exist. Performance appraisal researchers have found that self-ratings of performance tend to be more lenient or higher than ratings obtained from supervisors or peers (Mabe & West, 1982). Several explanations have been offered for this phenomenon such as self-enhancement and attribution bias. In the case of OCB, there are several unique reasons why self-ratings may be higher than ratings provided by others. For example, many instances of OCB may only be known to the self as the behavior may have not been noticed or observed by others. Further, given that OCB consists of non prescribed behavior, the occurrence of such behavior may not bring public recognition to the same extent as would task performance. Consequently, others in the organisation may not be aware of citizenship behaviors.

The discretionary nature of OCB and the fact that multiple recipients may be the beneficiary of the behavior (McNeely & Meglino, 1994) poses a particular dilemma for researchers as to the appropriate source to evaluate characteristic levels of OCB. As noted by Moorman (1991), OCB consists of a great variety of behaviors, only some of which may be performed within the view of the supervisor. Indeed, many citizenship behaviors are more likely to be displayed in front of subordinates or other co-workers than in the view of supervisors. Further, the issue of rating source was found to be relevant in a recent meta-analysis of OCB research. The meta-analysis revealed that the relationship between OCB and

job attitudes varied as a function of rating source (self-ratings vs. ratings made by others) (Organ & Ryan, 1995). It is possible that a number of people occupying different positions within an individual's social network may have the opportunity to observe acts of OCB and hence, may serve as uniquely valid sources of OCB ratings. Several areas of psychological research have found that ratings obtained from different sources are often discrepant. Several explanations have been offered in the literature to help elucidate why ratings obtained from multiple sources differ. For example, rating error tendencies and differences in cognitive processing among raters may result in rating discrepancies (Tsui & Ohlott, 1988). Disagreement across rating sources may also be explained by the fact that there are differences between the private self and the person that others observe (Hogan, 1991). Individuals construct their own private meanings and explanations regarding both their performance and personality. To address this gap in the literature, the present study compared self, superior, and subordinate ratings of the five dimensions of OCB identified by Organ (1988).

MacKenzie, Podsakoff and Fetter (1991) suggest that a manager's view of subordinate performance is broader than the formal appraisal system due to inclusion of OCB. This idea has been further supported by Werner. Katz and Kahn (1978) distinguished between job-related behaviours which are labelled as in-role and extra-role. IRB has been defined as behaviour that is required or expected as part of the responsibilities assigned to one (Barksdale & Werner, 2001). On the other hand, ERB comprises discretionary behaviour which goes beyond existing role expectations (Van Dyne et al., 1995). These categories have also been labeled as "core" and "discretionary" behaviors.

Research has shown that employees carefully try to influence managerial impressions (Wayne & Ferris, 1990). One way that employees may enhance their image is by consciously performing citizenship behaviors that will be

noticed by their manager. Along these lines, several researchers have begun to recognize that individuals may engage in OCB for different reasons or motives. For example, Ferris, Judge, Rowland, and Fitzgibbons (1994) argued that employees may engage in OCB because they want to promote the welfare of others, or the organisation, or that they may do so as a form of political influence in an effort to help them. Likewise, Folger (1993) reasoned that OCB may be motivated by what he termed achievement striving (i.e., attempting to achieve recognition and reward by performing above and beyond expectations and engaging in exceptional actions at work) or for altruistic reasons (i.e., dispositional factors or out of loyalty wherein the individual is not concerned with whether or not the exceptional actions are recognized).

Using an inductive approach to explore the content domain of OCB in India, we identified five major OCB dimensions—conscientiousness, helping co-workers, group activity participation, sportsmanship and courtesy which are similar to those that have been empirically investigated in the Western OCB literature. This suggests that these five dimensions have broad applicability across cultures. However, the specific behaviors that constitute the construct domain of these dimensions are far from identical. For example, helping co-workers in India includes non-work helping, which is typically not considered part of altruism in the United States.

Relatively lesser number of research studies has been conducted to obtain data about various rating sources. A study conducted by Allen, Barnard, Rush and Russell (2000) attempted to measure the variations in ratings conducted by superiors and subordinates & self. Results revealed that there exists a moderate correlation between superior and subordinate ratings of overall OCB. However there was a lesser consistency in the ratings conducted by one compared to those done by others. Another major finding generated by the survey was that

subordinates tend to rate an individual on a lower level than a superior or self. Hence the reliability of rating can be enhanced substantially by employing multiple raters. The validity and utility of multiple rating sources has been recognized by researchers investigating formal performance appraisal systems (Bernardin, Dahmus, & Redmon, 1993). Likewise, the use of multiple raters may result in a more complete assessment of the OCB criterion domain. By extension, averaging multiple ratings obtained from different sources (subordinates, peers, and supervisors) should allow for a more comprehensive assessment of characteristic levels of OCB. Furthermore, obtaining multiple rating perspectives is likely to become an increasingly important challenge, given that OCBs are beginning to be recognized as potential criteria for use in performance appraisal and selection research and practice.

Podsakoff et. al. 2000 show that levels of citizenship performance tend to be enhanced in organisations that set group goals, demonstrate a high degree of justice, design jobs to be intrinsically satisfying and have leaders who provide a supportive environment and who themselves exhibit a citizenship behavior.

3.15 Demographic Variables and Perceived IHRP

Ajzen and Fishbien [1980] pioneered the notion of reasoned action which posits that the intention of an individual leading to any particular behaviour is influenced by the person's attitude toward that behaviour and subjective norms. This theoretical position has been widely appreciated because of its usefulness in explaining behaviour in a variety of contexts. Ajzen and Fishbein [1975] recognised the possible effect of demographic variables such as age, sex, occupation, socioeconomic status, religion and education on behaviour.

Talukder and Quazi (2010) included the demographic characteristics like age, education level and training level as factors influencing employee

perception of innovation. They also propose that future studies can include gender as a demographic variable to identify if gender has any impact on perception and acceptance behaviour with regard to technological innovation in an organizational context. Igbaria (1993) has found that age, gender, and education had low but significant effects on the perceived user acceptance of technology. Contrary to this study, Kraut et al. (1998) concluded that gender and age had no significant influence on the individuals' adoption and use of a new communication medium and where as organizational level has significant influence on it. Kossek (1989) has found that age, gender and hierarchical level has significant influence on the acceptance of HRM Innovations.

Considering the position taken by earlier researchers and their findings quoted hitherto the present study assumes the significance of socio-demographic variables in deciding the employee's perception of the significance and appreciation for IHRP in their respective organisation. The study also proposes to establish the link between personal background variables and their perception on IHRP in the light of the data to be collected from respondents.

The debate about a Universalist versus a contingency approach would have been settled long ago in favour of contingency theory. It has a strong logic, particularly in the context of strategic fit with the external environment (Guest, 2011). However, the empirical evidence appears to favour a universalist model (Combs *et al.*, 2006). The researcher after analysing the various approaches adopted the universalistic best practice approach as rationale for the study. (Bowen and Ostroff, 2004) offered a theory of HRM implementation. Another challenge for much of the research on HRM is that it collects data on the presence of practices whereas Wright and Nishii (2006) and Khilji and Wang (2006) among others have highlighted the need to distinguish between intended and implemented practices. The researcher intended to study not only the presence or

absence of innovative HR practices but to what extent it is important in the organisation to achieve its goals, the extent of its introduction and implementation and the level of satisfaction among the employees.

Guest (1997) had argued that we needed a better theory about HR practices, about outcomes and about the link between them. Earlier studies have pointed out the need for studying the black box in the HRM-Performance relationship. Dyer & Reeves (1995) and Gerhart (2005) insist on studying the proximal outcomes of HR practices rather than the distal ones. This was the motivation of the researcher to study the select HR outcomes like job satisfaction, organisational commitment and organisational citizenship behaviour as outcome variables.

A methodological issue that continues to be debated concerns who should provide information about HRM. HR managers are not very reliable informants and that it is more sensible to seek information from those experiencing the practices, namely workers. Considering this view researcher adopted to collect data from the software professionals and not HR managers / staff.

A very recent study by Guest (2011) has called for the use of structural equation modelling, with the HRM discipline to specify linkages among HR practices and Outcomes. Accordingly to SEM has become commonplace in HRM research in the above context. Researcher intended to validate a model linking Innovative HR Practices and HR Outcomes in the above said context.

3.16 Conceptual focus of the study

The intentional introduction and application of any previously unused concept, practice, process or system is designed to influence or adapt the behaviour of employees with the aim of achieving improved organisational performance, identified and implemented by human resource practitioners. New economic

realities have put pressure on the human resource function to demonstrate how it can add value to the firm's bottom line. Early conceptualizations often questioned the function's relevance to organisational effectiveness, mainly for the fact that HR was seen to hold a primarily a reactive, administrative role. Moreover, a typically theoretical approach to HRM has made it difficult in the past to articulate how the HR function could actually influence strategic level objectives. This has been aided by a substantial body of evidence linking innovative approaches to human resource management with various indicators of organisational success, and by theoretical developments based on to the resource-based view of the firm. These developments have helped shift attention squarely on the importance of people in achieving competitive advantage. Innovative HR practices are divided into 14 different categories like employee acquisition strategies, employee retention strategies, compensation and incentives, benefits and services, rewards and recognition, technical training, management development, career planning and development practices, performance appraisals, potential development, employee relations with a human face: treating employees with concern, employee exit and separation management, adopting responsibility for socially relevant issues.

The substantial volume of research on the link between HRM and organisational performance in the last 15 years has paid little attention to the causal chain linking policy inputs to performance outcomes. In this 'HRM black box' the critical link is how HR practices influence employee attitudes and improve worker performance in ways which are beneficial to the employing organisation. This focuses on their perceptions of HR practices and establishing correlations with their commitment to the organisation and their job satisfaction. This is then related in the causal model to employee discretionary behaviour, sometimes referred to as organisational citizenship behaviour (OCB), While some HR policies may impact on employees directly, most rely on line manager action or support, and the quality

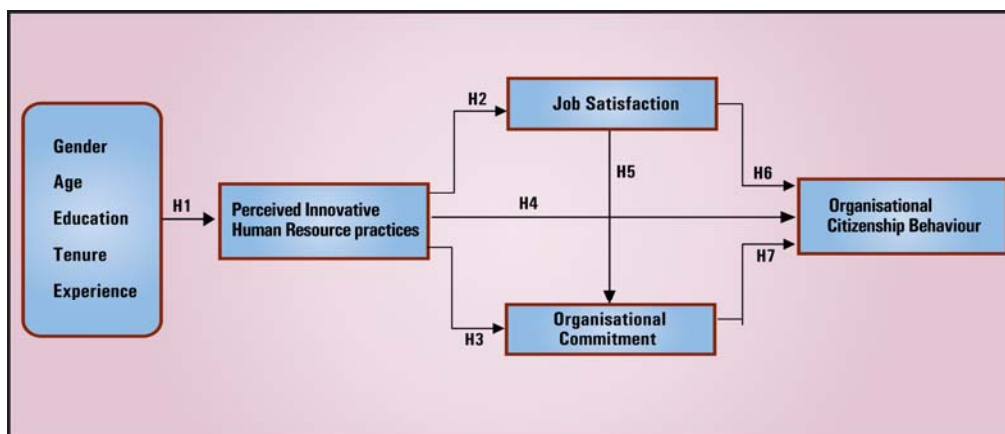
of the relationship between employees and their immediate line managers is liable, too, to influence perceptions not only of HR practices but of work climate, either positively or negatively. The extent and nature of this discretionary behaviour will be influenced by the design and range of HR practices they are expected to implement. Where an extensive range of HR policies exist and are well known, managers are provided with the tools, techniques and procedures to use in people management. These then can be expected to modify or influence the relationship between managers and their subordinates. Employee commitment to the organisation will be influenced by their perceptions of these practices as well as their relationship with their managers.

The conceptual focus adopted for this study can be visualized as shown below:

Table 3.1. The nature of variables of the study

	Variables of the study	Descriptions
1.	Socio-Demographic	Background
2.	Innovative HR Practices	Independent
3.	Job Satisfaction	Intervening
4.	Organisational Commitment	Intervening
5.	Organisational Citizenship Behaviour	Dependent

Fig. 3.1 Diagrammatic Representation of the Conceptual Model



Job satisfaction is one of the most prominent correlates of Innovative HR Practices. It inculcates in employees a positive state of mind which in turn motivates them to repay their organisation. Organisational commitment is the existence of some baseline of satisfaction required to trigger altruistic behaviours in the organisation. Positive beneficial actions directed at employees by the organisation create an impetus for employees to reciprocate in positive ways through their attitudes and/or behaviours. The relationship exists between job satisfaction and IHRP, In addition to this, job involvement, organisational trust and perceived needs were also strongly related to IHRP.

Organisational commitment (OC) is defined as the relative strength of an individual's identification with and involvement in an organisation. Organ and Konovsky (1989) suggest that good citizenship behaviour is an essential function of fair treatment by the organisation. Further, perceptions associated with managerial and co-worker behaviours, advancement opportunities and on-the-whole work culture were strong antecedents of OCB. An individual's perception of the commitment that exists in their relationship with the organisation is positively associated with an employees' willingness to reciprocate by engaging in OCB and is also positively related to the broadening of job boundaries to include citizenship type behaviours. Meyer and Allen (1997) say that employees with a strong personal attachment and identification to the company continue employment is called as affective commitment. Other factors which foster commitment are obligation due to social pressures i.e., continuance commitment, and associated costs with leaving the organisation i.e. normative commitment. It shows a negative relationship between affective commitment and turnover intentions. The three components of organisational commitment are affective, continuance and normative commitment. They are best viewed as disguisable components, rather than types, of attitudinal commitment; that is, employees can

experience each of these psychological states to varying degrees. Some employee, for example, might feel both a strong need and a strong obligation to remain, but no desire to do so; others might feel neither a need nor obligation but a strong desire, and so on. Organisational Citizenship Behaviour (OCB) consists of behaviour which is neither described nor prescribed by the organisation; a common set of performance standards for rating organisational citizenship behaviour does not exist. OCB consists of non prescribed behavior; the occurrence of such behavior may not bring public recognition to the same extent as would task performance. Consequently, others in the organisation may not be aware of citizenship behaviors.

The discretionary nature of OCB and the fact that multiple recipients may be the beneficiary of the behavior poses a particular dilemma for researchers as to the appropriate source to evaluate characteristic levels of OCB. The meta-analysis revealed that the relationship between OCB and job attitudes varied as a function of rating source (self-ratings vs. ratings made by others). It is possible that a number of people occupying different positions within an individual's social network may have the opportunity to observe acts of OCB and hence, may serve as uniquely valid sources of OCB ratings. Disagreement across rating sources may also be explained by the fact that there are differences between the private self and the person that others observe (Hogan, 1991). Individuals construct their own private meanings and explanations regarding both their performance and personality. To address this gap in the literature, the present study compared self, superior, and subordinate ratings of the five dimensions of OCB identified by Organ (1988).

MacKenzie, Podsakoff and Fetter (1991) suggest that a manager's view of subordinate performance is broader than the formal appraisal system due to inclusion of OCB. This idea distinguished between job-related behaviours

which are labeled as in-role and extra-role. IRB has been defined as behaviour that is required or expected as part of the responsibilities assigned to one. On the other hand, ERB comprises discretionary behaviour which goes beyond existing role expectations. These categories have also been labeled as "core" and "discretionary" behaviors. Likewise, Folger (1993) reasoned that OCB may be motivated by what he termed achievement striving (i.e., attempting to achieve recognition and reward by performing above and beyond expectations and engaging in exceptional actions at work) or for altruistic reasons (i.e., dispositional factors or out of loyalty wherein the individual is not concerned with whether or not the exceptional actions are recognized).

Using an inductive approach to explore the content domain of OCB in India, we identified five major OCB dimensions—conscientiousness, helping co-workers, group activity participation, sportsmanship and courtesy which are similar to those that have been empirically investigated in the Western OCB literature. This suggests that these five dimensions have broad applicability across cultures. However, the specific behaviors that constitute the construct domain of these dimensions are far from identical. Podsakoff et. al. 2000 show that levels of citizenship performance tend to be enhanced in organisations that set group goals, demonstrate a high degree of justice, design jobs to be intrinsically satisfying and have leaders who provide a supportive environment and who themselves exhibit a citizenship behavior. From the literature backdrop available shows Job satisfaction is one of the most prominent correlates of Innovative HR Practices (Bateman & Organ, 1983, Puffer, 1987, Organ & Konovsky, 1989). It inculcates in employees a positive state of mind (Smith, 1983) which in turn motivates them to repay their organisation through OC (Schnake et. al., 2003). Organ and Konovsky (1989) suggest that good citizenship behaviour is an essential function of fair treatment by the organisation. Further to

it William and Anderson (1991) found that perceptions associated with managerial and co-worker behaviours, advancement opportunities and on-the-whole work culture were strong antecedents of OCB. Based on the theoretical framework and deducing from the conceptual focus adopted for this study the following hypotheses have been proposed for this study.

- H1 There is a significant difference in perceived importance, extend of introduction of Innovative HR practices and satisfaction with the Innovative HR practices across the Gender, Age, Educational qualification, Tenure and Experience
- H2 Higher the perceived importance, extent of introduction of Innovative HR Practices and extent of satisfaction with the Innovative HR practices, higher is the employee level of Job satisfaction.
- H3 Higher the perceived importance, extent of introduction of Innovative HR Practices and satisfaction with the Innovative HR practices, higher is the Organisational Commitment.
- H4 Perceived importance, extent of introduction of Innovative HR Practices and satisfaction with the Innovative HR practices are positively related to the level of Organisational Citizenship Behavior.
- H5 There is positive relation between Job Satisfaction with Organisational commitment,
- H6 There is positive relation for Organisational Commitment with Organisational Citizenship Behavior.
- H7 Higher the Job Satisfaction, higher will be the Organisational Citizenship Behavior.

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RESEARCH METHODOLOGY

C o n t e n t s	4.1	Rationale for the Study
	4.2	Statement of the Problem
	4.3	Objectives
	4.4	Research Hypotheses
	4.5	Definitions
	4.6	Basic Research Design
	4.7	Tools of Data Collection
	4.8	Reliability Analysis
	4.9	Confirmatory Factor Analysis
	4.10	Scope of the Study
	4.11	Data Collection
	4.12	Population
	4.13	Procedure for Identification of Firms with Innovative HR Practices
	4.14	Selection of the Units of Observation
	4.15	Sample Size and Sampling Method
	4.16	Statistical Analysis and Validation
	4.17	Limitations

This chapter purports to introduce and explain in detail the terms and variables, which go into the formulation of the basic theoretical framework of this study. The hypothesized relationship between innovative human resource practices and HR outcomes like job satisfaction, organisational commitment and organisational citizenship behavior is portrayed in this chapter based on the learning deduced from the literature.

4.1 Rationale for the study

The promise of many new human resource management programs can be attributed to an emphasis on invention over systematic implementation, and a rationale spurring their adoption. Organisations prone to faddishness may initiate HRM innovations to appear more legitimate in their environments (DiMaggio and Powell, 1983). The prime impetus for the introduction of a personnel practice may be because competitors have already done so, or because the practice is the latest panacea being touted by the local management-consulting group. Adopting and sustaining progressive human resource management programs is a critical issue faced by many organisations today. There is still much to be understood about when innovations in human resource management successfully take hold and when they do not. Although innovative personnel programs are frequently adopted to improve the workplace, many organisations fail to systematically evaluate their effectiveness after implementation. Despite the fact that HRM innovations are typically introduced to achieve outcomes such as favorable employee attitude and behavior, they generally fall short of management expectations. The problems of adopting and sustaining progressive HR practices have important organisational significance, and this study attempts to understand the conditions fostering HR Outcomes by successful introduction, implementation and satisfaction of new HRM initiatives.

A key problem adopting and sustaining human resource management innovations stems from the difficulties that often arise from the attitude of employees. HRM innovations may have been very well designed, but the question of its effectiveness cannot be answered as it might take days, months and years to find it. In addition, responses to questions of effectiveness will differ greatly between organisational members. A key assumption here is that acceptance of HRM innovation is a necessary but insufficient condition for effectiveness and the

employees accept HRM innovation only when they have a favourable attitude towards it. Attitudinal acceptance is measured through the possession of favourable reactions to the innovation. Acceptance of innovation can be measured for individuals, groups, and organisations. An individual employee's attitude toward an innovation can be easily measured. Acceptance of innovation also can be differentiated by the general attitudes and behaviors of employees.

There has often been little concern with the quality of adoption and the differential impact of adoption on organisational members (Kossek, 1987). By studying HRM innovations adopted in IT firms, the study intends to study the relationship between acceptance and its impact on employees. It is believed that some HRM innovations have a more central impact on the quality of employee working life than others. Some affects their day-to-day working where as others do not. It is important to note that the consequences of implementation of innovative HR practices are difficult to measure, because their assessment is subjective and value-laden and is often confounded with other effects. Hence outcomes may vary according to the characteristics of the HRM innovations.

This study views adoption and sustenance of innovations in human resource management programs as part of HR Strategy and examines the relationship between the innovative HR Practices and HR Outcomes.

Other than C. T. Argyris's (1964) work on T-groups and W. F. Whyte's (1961) observations on the group effects of incentive systems, most of the research has focused on the mechanics of designing and administering a single innovation and has been very narrow in its examination of the impact of new human resource programs (Kossek, 1989). Some HRM innovations are adopted merely to promulgate the position of the personnel department; there are obvious ramifications for organisational acceptance.

In summary, the human resource management literature has concentrated on the mechanics of designing and administering specific innovations like a new performance appraisal or compensation program. By doing so, however, it often has neglected to study the politics of implementing human resource innovations, the degree to which innovations receive acceptance over an extended period of time, and their relation to other personnel programs and the overall work relations system. Also, the glaring issue that personnel departments traditionally have poor images in their firms and the reality that most top managers are tangentially involved with human resource issues has received cursory attention. This gap can be partially attributed to the lack of interest by researchers in studying the entire continuum of personnel practices, which has historically been focused only on major innovations such as interventions involving worker participation in decision-making.

4.2 Statement of the problem

Adopting and sustaining progressive human resource management programs is a critical issue faced by many organisations today. There is still much to be understood about when innovations in human resource management practices successfully take hold and when they do not. Although innovative personnel programs are frequently adopted to improve the workplace, many organisations fail to systematically evaluate their effectiveness after the implementation. Despite the fact that HRM innovations are typically introduced to achieve outcomes such as favourable employee attitudes and behaviour, they generally fall short of management expectations. This study views adoption and sustenance of innovations in human resource management practices as part of HR strategy and examines the relationship between the innovative HR practices and certain selected HR outcomes.

4.3 Objectives

Based on the conceptual focus highlighted in the previous chapter, the study proceeds to inquire into the set of objectives and test the hypotheses framed as under:

4.3.1 Major objective

To explain and establish the human resource outcomes in software firms in Kerala as consequences of Innovative Human Resource Practices (IHRP).

4.3.2 Specific objectives

- a) To study the perception regarding innovative HR practices among the employees in software firms in Kerala in terms of:
 - Importance of innovative HR practices for achieving the objectives of the organisation,
 - The extent of introduction of innovative HR practices and,
 - The extent of satisfaction with the innovative HR practices implemented in the organisation.
- b) To bring out the human resource outcomes reflected by their levels of job satisfaction, organisational commitment and organisational citizenship behaviour.
- c) To ascertain the relationship between innovative HR Practices and the human resource (HR) outcomes among the employees in software firms in Kerala.
- d) To develop and statistically validate a model linking innovative HR practices and the HR outcomes.

4.4 Research hypotheses

Based on the literature given earlier, the researcher formulated the following seven hypotheses on the anticipated relationship among the variables in the study. The hypotheses relates to employee population confined to software firms in Kerala.

- H1₁ There is a significant difference in the perceived importance; extend of introduction and satisfaction with the innovative HR practices across the categories of gender, age, educational qualification, experience and tenure of the employees in the software firms.
- H2₁ Higher the perceived importance, extent of introduction and satisfaction with the innovative human resource practices, higher is the level of job satisfaction.
- H3₁ Higher the perceived importance, extent of introduction and extent of satisfaction with the innovative human resource practices, higher is the level of organisational commitment.
- H4₁ Perceived importance, extent of introduction and satisfaction with the innovative HR practices are positively related to the level of organisational citizenship behaviour.
- H5₁ There is positive relationship between job satisfaction and organisational commitment.
- H6₁ Higher the job satisfaction, higher is the organisational citizenship behaviour.
- H7₁ There is positive relationship between organisational commitment and organisational citizenship behaviour.

4.5 Definitions

4.5.1 Innovative Human Resource Practices (Theoretical Definition)

Innovative HR practices have been defined as “the intentional introduction and application of any previously unused concept, practice, process or system designed to influence or adapt the behaviour of employees with the aim of achieving improved organisational performance, identified and implemented by human resource practitioners of an organisation "(Mac Duffie, 1995).

Operationally

It is the perceived extent of the importance, introduction and satisfaction of the innovative HR Practices as perceived by the employees of a Software firm obtained by using the questionnaire by Tanuja Agarwala (2003).

4.5.2 Job Satisfaction (Theoretical Definition)

Edwin A. Locke’s Range of Affect Theory (1976) is arguably the most famous job satisfaction model. The main premise of this theory is that satisfaction is determined by a discrepancy between what one wants in a job and what one has in a job.

Operationally

Job satisfaction is a multidimensional construct that consists of overall job satisfaction as well as a variety of job satisfaction facets .It describes a person’s overall affective reaction to a set of work and work related factors. It comprises of satisfaction with job security, compensation, personal growth satisfaction, satisfaction with coworkers and satisfaction with supervisor as measured by the 14 item questionnaire of Hatfield (1985) .

4.5.3 Organisational Commitment (Theoretical Definition)

Organisational commitment can be theoretically defined as a psychological link between the employee and his or her organisation that

makes it less likely that the employee will voluntarily leave the organisation (Allen and Mayer, 1996). Affective commitment is defined as the strength of a person to continue working for an organisation because he or she agrees with it and wants to do so (Meyer and Allen, 1991). Continuance commitment is conceived as the strength of a person's tendency or need to continue working for an organisation because he or she cannot afford to do otherwise (Meyer and Allen, 1991). The 'net sum' of a person's commitment to the organisation, therefore, reflects each of these separable psychological states.

Operationally

Operationally, organisational commitment is defined as the feeling of belongingness that an employee has to the organisation, his loyalty and his obligation to remain with the organisation. This construct was used for measuring affective, continuance and normative commitment developed by Meyer, Allen and Smith (1993). Organisational commitment comprises two dimensions affective commitment and continuance commitment (Meyer and Allen, 1990). For the purpose of this study affective commitment is defined as the employee's emotional attachment to, identification with, and involvement with the organisation. Employees with a strong affective commitment continue employment with the organisation because they want to do so and continuance commitment is defined as an awareness of the costs associated with leaving the organisation. Employees whose primary link to the organisation is based on continuance commitment remain because they need to do so.

4.5.4 Organisational Citizenship Behaviour (Theoretical Definition)

The term "organisational citizenship behaviour" (OCB) was coined to depict employees willingness to go above and beyond the prescribed roles which they have been assigned (Baterman and Organ, 1983). These behaviours are considered as a contribution to the maintenance and enhancement of the

social and psychological context that supports task performance in the organisation. At the same time, Organ (1988), in his much quoted and well-known book *Organisational Citizenship Behavior—the Good Soldier Syndrome*, defined OCB as “individual behaviour that is discretionary, not directly or explicitly recognised by the formal reward system, and that in the aggregate promotes the effective functioning of the organisation”.

Operationally

Williams and Anderson (1991) identified two broad categories of OCB:

“OCBO-behaviours that benefit the organisation in general (e.g., gives advance notice when unable to come to work, adheres to informal rules devised to maintain order), and

OCBI-behaviours that immediately benefit specific individuals and indirectly through this means contribute to the organisation (e.g., helps others who have been absent, takes a personal interest in other employees)” According to Williams and Anderson (1991), citizenship behaviors can be directed at the organisation (OCBO) (e.g., carrying out role requirements well beyond minimum required levels) and/or they may benefit specific individuals (OCBI) (e.g., helping a specific other person with a relevant task).

4.5.5 Software Firms

The term ‘IT industry’ is used loosely in common parlance and has different meanings in different contexts. Strictly speaking, ‘IT’ includes hardware production as well as software, but in the Indian context the IT industry is almost entirely devoted to software services, hence the terms ‘software industry’ and ‘IT industry’ are often used interchangeably. Similarly, ‘IT’ is sometimes used to refer to ITES as well as software services. While ITES is a very different kind of industry from software, for historical

and ideological reasons they have tended to be categorised together in India under 'IT' – not least because both come under the ambit of NASSCOM, the industry body that has been very active in promoting these industries. This study has covered employees in software services and products firms only thereby excluding ITES from the preview of the study.

4.6 Basic research design

Methodologically the study falls into a descriptive cum explanatory framework. The study is descriptive in that it seeks to depict the distribution of employees who have differential levels of perception regarding the importance, extent of introduction and satisfaction levels in respect to the innovative HR practices in their respective firms and the distributions in terms of the criterion factors of HR outcome variables. Study proceeds to seek the precedent outcome linkages among the factors of both IHRP and HR outcome variables. Further the data were used to achieve the most appropriate fit among the factors of the independent and dependent variables using Structural Equation Modeling (SEM) and is thus explanatory in character.

4.7 Tools of Data Collection

4.7.1 Questionnaire on Innovative HR Practices

This tool was designed by the Agarawala, T (2003) to assess employee perception of the innovative HR practices of certain selected organisations along the three dimensions of importance, introduction and satisfaction. The final version of the scale consisted of three parts, A, B and C, each having 14 items, the total number of items being 42. The fourteen items in each part of the questionnaire referred to fourteen HR practice categories, each HR practice category being broad enough to incorporate a number of innovative techniques. These techniques were given as examples for each respective category. Each part

of the questionnaire used a 4-point rating scale with 1 indicating a poor perception and 4 indicating a good perception for each dimension of innovative HR practice. The range of scores possible for each part (dimension) of the scale was 14 to 56.

The split-half reliability coefficient for Part A (introduction), Part B (importance) and Part C (satisfaction), using the Spearman-Brown formula, was found to be 0.80, 0.85 and 0.81 respectively.

4.7.2 HR Outcomes

The HR variables measured included Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour.

4.7.3 Job Satisfaction

This was measured using 14 item questionnaire by Hatfield (1985). It comprises of Satisfaction with job security, compensation, personal growth satisfaction, satisfaction with coworkers and satisfaction with supervisor. Respondents were asked to indicate their agreement or disagreement with each of the items listed in the questionnaire using a 7-point scale ranging from “extremely satisfied” through “extremely dissatisfied”. The reliability scores of the Cronbach’s alpha values for different aspects are satisfaction with work (0.81), satisfaction with pay (0.90), satisfaction with coworker (0.83), satisfaction with supervisor (0.82) and overall job satisfaction is (0.68).

4.7.4 Organisational Commitment

It was measured using a ten items questionnaire to construct the commitment scale derived from the instrument developed by Meyer and Allen (1990) it has two dimensions the affective commitment and continuance commitment. Each dimension had 5 items each. Respondents were asked to indicate their agreement or disagreement with each of the items listed in the questionnaire using a 7-point scale ranging from “strongly disagree” through

“strongly agree” with a midpoint labeled “neither agree nor disagree.” The reliability cronbach’s alpha scores of the two dimensions of the organisational commitment are affective commitment (0.81) and continuance commitment (0.78) with a split half coefficient of 0.77 and 0.76 respectively.

4.7.5 Organisational Citizenship Behavior

OCB was measured using a 12-item Scale made by Paré, Tremblay, and Lalonde, which was adopted from Podsakoff et al. (1990) and Williams and Anderson (1991). Citizenship behaviors can be directed at the organisation (OCBO) (e.g., carrying out role requirements well beyond minimum required levels) and/or they may benefit specific individuals (OCBI) (e.g., helping a specific other person with a relevant task).

Williams and Anderson’s (1991) seven-item OCBO and seven-item OCBI scales took most of the measures representing these constructs from previous research by Bateman and Organ (1983), Graham(1986a), Organ (1988) and Smith et al.(1983).

The internal consistency reliability of the OCBI Scale was 0.88 and the internal consistency reliability of the OCBO Scale was 0.75. Estimates of internal consistency reliability of the OCBI Scale averaged 0.85 across the studies conducted by Williams and Anderson (1991), Turnley et al. (2003), and Randall et al. (1999), ranging from a low of 0.80 to a high of 0.88. The internal consistency reliability estimates for OCBO in these studies averaged 0.76, ranging from a low of 0.70 to a high of 0.83. Overall the scale appears to be highly reliable (Organ et al 2006).

Respondents were asked to indicate their agreement or disagreement with each of the items listed in the questionnaire using a 7-point scale ranging from “strongly disagree” through “strongly agree” with a midpoint labeled

“neither agree nor disagree.” There were three reverse coded items in OCBO scale like take undeserved work breaks, great deal of time spent with phone conversations and Complains about insignificant things at work.

4.8 Reliability Analysis

Reliability of an instrument is the degree to which it yields a true score of the variable under consideration. It is defined as the extent to which any measuring instrument yields the same result on repeated trials (Carmines and Zeller, 1991). An instrument is not considered to the extent to which it contains measurement error (Neale and Liebert, 1986).

There are several methods to establish the reliability of a measuring instrument. These include test-retest method, equivalent forms, split-halves method and internal consistency method. Of all these methods, the internal consistency method is supposed to be the most effective method, especially in field studies. The advantage of this method is that it requires only one administration, and consequently this method is considered to be the most general form of reliability estimation. In this method, reliability is operationalized as ‘internal consistency’, which is the degree of inter-correlation among the items that constitute a scale (Nunnally, 1978).

The internal consistency of a set of items refers to the homogeneity of the items in a particular scale. Internal consistency is estimated using a reliability coefficient called Cronbach’s alpha (Cronbach, 1951). An alpha value of 0.70 or above is considered to be the criterion for demonstrating strong internal consistency of established scales (Nunnally, 1978).

In the current study the reliability was tested by computing Cronbach’s alpha (α) for all the factors as well as for the entire set. The values of Cronbach’s alpha for various factors are given in the table 4.1. As seen from

the table, all the factors had the Cronbach's alpha value above 0.70, which testified the reliability of the entire set.

Table 4.1. Reliability analysis of different variables of the study

SL. No.	Factors	No. of items	Cronbach alpha (α)
1.	Innovative Human Resource Practices (IHRP)	42	0.826
2.	Job Satisfaction (JS)	14	0.930
3.	Organisational Commitment (OC)	10	0.824
4.	Organisational Citizenship Behaviour (OCB)	12	0.846
	Overall	78	0.932

4.9 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis was done on the final data to confirm the structure developed with the study. The general paradigm suggested by Anderson and Gerbing (1988) was followed in the current research in order to test a model of Innovative HR Practices and various HR outcomes. The measurement models of each of all outcomes were first assessed and then a structural model linking all the outcomes was tested. Software package AMOS 4.0 was used to do the Confirmatory Factor Analysis. The following are the commonly used fit indices which help to assess the fit between a model and a data set which in turn proves its validity.

4.9.1 Confirmatory Factor Analysis on Innovative HR Practices (IHRP)

Confirmatory Factor Analysis was done on Innovative HR Practices consisting of three factors i.e. Introduction, Importance and the Extent of Satisfaction of IHRP.

Table 4.2. Confirmatory Factor Analysis values for Innovative HR Practices

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.848	0.821	0.846	0.827	0.031	0.039

4.9.2 Confirmatory Factor Analysis on Job Satisfaction (JS)

Confirmatory Factor Analysis was done on Job Satisfaction consisting of four factors i.e. Job Security & Compensation, Personal Growth Satisfaction, Co-worker Satisfaction and Supervisory Satisfaction.

Table 4.3. Confirmatory Factor Analysis values for Job Satisfaction

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.923	0.893	0.956	0.947	0.056	0.065

4.9.3 Confirmatory Factor Analysis on Organisational Commitment (OC)

Confirmatory Factor Analysis was done on Organisational Commitment consisting of two factors i.e. Affective Commitment and Continuance Commitment.

Table 4.4. Confirmatory Factor Analysis values for Organisational Commitment

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.943	0.898	0.938	0.910	0.093	0.078

4.9.4 Confirmatory Factor Analysis on Organisational Citizenship Behavior (OCB)

Confirmatory Factor Analysis was done on Organisational Citizenship Behavior consisting of two factors i.e. OCB Individual and OCB Organisation.

Table 4.5. Confirmatory Factor Analysis values for Organisational Citizenship Behavior

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.938	0.887	0.939	0.906	0.088	0.075

The values got from the Confirmatory Factor Analysis done on Innovative HR practices, job satisfaction, organisational commitment and Organisational Citizenship Behavior reveals that the model is acceptable as the values fall within the acceptable ranges.

4.10 Scope of the study

Unit of observation and analysis:

Software professionals who are employees of the software firms identified as those with innovative HR Practices.

Place of study: Technopark, Thiruvananthapuram and Infopark, Kochi

Data Sources

Primary data collected from the software professionals who contribute the population of the study. Secondary data from the NASSCOM Directory 2005 & 2007, Data Quest and India Today 2005, IT & Telecom Directory 2005, websites of Software Technology Parks of India (STPI), Thiruvananthapuram, Infopark , Kochi and company databases.

4.11 Data Collection

- a) Kochi and Thiruvananthapuram were taken as representative Techparks of software sector in Kerala.
- b) Unit Heads / HR Heads of the firms in the selected Techparks were contacted with a request to participate in the study.
- c) Data collection coordinated by the respective HR department and was confined to one of the projects / product development team.
- d) Internal coordinators were identified in each team in order to facilitate the data collection.

The very objective of the study has been to study the extent of importance, introduction, implementation and satisfaction of innovative HR practices in Software companies in Kerala and HR outcomes based on an empirical analysis. Such an empirical study demands a rigorous research methodology with a reliable and valid instrument. The extent of importance, introduction, implementation and satisfaction of innovative HR practices in Software companies is done by measuring the perceptions of members in the organisation on innovative HR practices. The questionnaire survey has been widely acknowledged as an efficient tool for measuring the perceptions of individuals or organisations on a particular subject. The survey research method is very useful to collect data from a large number of firms in a relatively short period of time and with better-cost implications. Hence for the current study, the questionnaire survey has been chosen for data collection.

4.12 Population

The population for the present study was specified through the progressive sequence as follows:-

- a) List of software firms from the respective selected Techparks [Software Technology Parks of India (STPI), Thiruvananthapuram and Infopark, Kochi] was compiled to broadly define the population of the study.
- b) Human resource experts from software firms, management consultants and the faculty from Indian Institute of Information Technology & Management (IIITM), Thiruvananthapuram were approached to identify the firms that have adopted innovative human resource practices against a set of specified criteria.
- c) One project team with on-site and off shore project was selected from each of the firm identified in step b) above.

Exclusion criteria

- Software firms with history of less than 3 years
- Software professionals with experience of less than three months with the firm.

4.13 Procedure for identification of firms with innovative HR practices

Panel of experts were identified based on the method followed by Tannenbaum and Dupree-Bruno (1994). The experts consisted of HR experts, consultants and faculty members from Indian Institute of Information Technology and Management (IIITM) - Kerala.

Table 4.6. Classification of Experts

SI No.	Managerial hierarchy	No. of experts based on managerial hierarchy	Years of experience in HR field	No. of experts based on years of experience	Type of organisation	No. of experts based on type of organisation
1	Top Level	04	>30 years	03	Private	05
2	Senior Level	04	21-30 years	04	Consultants	03
3	Middle Level	03	11-20 years	04	Academics	03
	Total	11	Total	11	Total	11

The researcher in consultation with HR experts from the IT industry, researchers in the same field and professors in the area identified the various Innovative HR Practices implemented in the various Software Companies, as well as the companies that have adopted Innovative HR Practices in terms of -

- a) **Presence** (A dichotomous scale for whether it is actually in effect 'yes' or 'no').

- b) **Frequency** (Implementing many progressive HR practices is considered more innovative).
- c) **Uniqueness** (Implementing practices that few or no other IT companies have used or using practices differently than other companies).
- d) **Coverage** (A continuous scale for the proportion of the workforce covered by it).
- e) **Intensity of effort** (Implementing a practice that required a great deal of time, money, personnel and effort).

The panels of experts were personally met and the definition of IHRP and a range of HR practices/ activities which form 14 cluster of HR practices were shared and discussed. List of Software firms from Technopark and Infopark was given after the exclusion criteria. There were altogether 47 firms. For each firm, the frequency with which it was identified as having innovative HR practices by experts was tabulated. The firm mentioned by at least 50 per cent of the experts as having the reputation of being innovative in their HR practices was shortlisted. Out of a total of 48 firms, 21 firms fulfilled the criteria.

Table 4.6 above shows that the out of 11 experts identified 5 experts represented private organisations and 3 each from consultancy and academics .Out of these, 3 experts had experience of more than 30 years and four were with experience varying between 21-30 years and another four had 11- 20 years of experience. Based on the level of managerial hierarchy there are 3 experts from middle level and 4 experts each from top and senior level.

4.14 Selection of the units of observation

- Census approach was adopted to ensure the complete coverage of the population and to reflect the heterogeneity anticipated among the nature of projects, teams, firms and location of firms.
- 343 responses collected from 17 firms. Two firms did not agree to participate in the study and the researcher could not collect data from two other firms which had agreed to cooperate with the study.

Detailed examination of the data based on grossly missing or inappropriate values resulted in the deletion of 33 records. Thus the final data set had 310 usable records that comprise the total sample

4.15 Sample Size and Sampling Method:-

Sample size is decided based on power analysis which is used by Krishnan and Singh, (2010) where by forming an explanatory power of .80 and the f^2 value of 0.02 it was found that the sample size should be 287 but to decrease the problem of data inadequacy researcher has opted for the sample size of 310 samples.

$$f^2 = \frac{R^2}{1 - R^2}$$

where R^2 = population squared multiple correlation

$$f^2 = \frac{R_{AB}^2 - R_A^2}{1 - R_{AB}^2}$$

where R_A^2 = variance accounted for in the population by variable set A
 R_{AB}^2 = variance accounted for in the population by variable set A and B together

The first formula is appropriate when we are evaluating the impact of a set of predictors on an outcome. The second formula is appropriate when we are evaluating the impact of one set of predictors above and beyond a second set of predictors (or covariates). Cohen (1988) suggests f^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effect sizes.

The data was tested for the outliers through the process of Bootstrapping and Bolline-shrine plot so as to increase the normality of the data. The researcher found out that there were 8 outliers in the study and it was removed using the bootstrapping method. There were about 13 questionnaires which have not given the demographic variables so they were not selected for the study and rejected as incomplete questionnaire.

The sample adequacy was again ensured by referring to Hoelter Index as part of the fit measures of the final structural equation model of IHPR and HR outcomes. The Hoelter Index at 0.05 significance level showed 173 samples as adequate where as Hoelter Index at .01 significance level showed 197 samples as adequate for the study. Hence the sample of 310 was found to be adequate.

4.16 Statistical analyses and validation: -

Correlation, Regression, ANOVA test, t-test, Multivariate analysis and Structural Equation Modeling (SEM) using AMOS software were used for statistical analyses of the data and validation of various models. For this study researcher started with the sampling profile on the basis of socio-demographic variables like gender, age, educational qualification, tenure and experience of the employees. Analysis further looked into the effect of these socio-demographic factors on the respondents' perception of innovative HR practices. Further the impact of innovative HR practices on different HR outcomes of job satisfaction, organisational commitment and organisational citizenship behaviour were analysed using tests like regression and multivariate analyses. Researcher also tried to test the integrative model for innovative HR practices using Structural Equation Modeling (SEM) with AMOS 4.0. Subsequent step was to evaluate the degree of fit of several structural models for use in testing the hypotheses concerning relations among underlying latent variables.

4.17 Limitations

- a) The study is not free from limitations; first the issue of common method variance needs to be considered given the cross-sectional design of the study based on self reports. Meta-analytic studies of these constructs (Meyer et al. 2002; Organ & Ryan, 1995) suggest that studies relying only on self-report may either inflate correlations or, in a cross-sectional design, might introduce problems of instability in correlations due to situational moderators. Harman's single-factor was conducted to address this concern and the results of the test showed that common method bias was not present in study.
- b) All employees of the same organisation need not become equally aware of the innovative HR policies and practices adopted. Perceptual differences about these practices among the employees could be attributed to their varied levels of awareness about them though the policies and practices remain the same for the organisation. This aspect was not taken into account in the study.
- c) The life cycle of the organisation is also one of the important limitations because different companies are in different time zone of development cycles like some are there for decades and some are only for years. This difference can cause a bias on the perception of importance, introduction and satisfaction of innovative HR practices in the organisation.
- d) Software firms that have been identified by experts as having adopted innovative HR practices alone are covered in this research. Obviously, the study has not been extended to attempt a comparison with firms that follow traditional ways of managing personnel.

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INNOVATIVE HR PRACTICES AND THE HR OUTCOMES

C a n t e n t s	5.1	Data records
	5.2	Profile of the respondents
	5.3	Classification of software professionals based on Gender
	5.4	Classification of software professionals based on Age
	5.5	Classification of software professionals based on Educational Qualification
	5.6	Classification of software professionals based on Tenure
	5.7	Classification of software professionals based on Experience
	5.8	Perception on Innovative HR Practices
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	5.11	Impact of perception of IHRP on Job Satisfaction
	5.12	Impact of perception of IHRP on Organisational Commitment
	5.13	Impact of perception of IHRP on Organisational Citizenship Behaviour
	5.14	Relationships among the Outcome Variables

This chapter unfolds the empirical validation of the present research work and looks at the results of analysis using the final data. The chapter begins with the sample profile, proceeds to provide insights into the perception on the significance and implementation of innovative human resource practices and the satisfaction of the respondents on these practices and the consequences of these on the selected HR outcome constructs and concludes with results of testing of a series of hypotheses.

5.1 Data Records

The researcher distributed 400 questionnaires to the chosen 21 companies that had agreed to participate in the study. 343 filled questionnaires were collected back from 17 companies. Detailed examination of the data resulted in deletion of 33 data records that were found invalid. Thus the final data set had 310 usable records from the 17 companies. Table 5.1 gives data collection details.

Table 5.1. Sample collection details

Location	No. of companies participated	No. of questionnaires given	No. of responses received	No. of invalid responses	Final no. of valid responses	Response Rate
Kochi	5	123	89	14	75	60.90%
Thiruvananthapuram	12	344	254	19	235	68.30%
Total	17	467	343	33	310	66.30%

The table 5.1 above shows that there is a good rate of response which varies from 60% to 68% range. The researcher had mainly taken data from the software companies in Thiruvananthapuram and Kochi. Out of the 17 companies selected about two third were from the Thiruvananthapuram Techno park.

Out of the 343 records 25 filled in questionnaires did not give the demographic information and such data records were rejected as incomplete ones, thus reducing the number of data records to 318. Further the data was tested for outliers through the process of Bootstrapping and Bolline-shrine plot so as to increase the normality of the data, found out that there are 8 outliers in the study and they were removed using the bootstrapping method. Data record size was decided based on power analysis as reported by Krishnan and Singh

(2010) wherein an explanatory power of .80 and the f^2 value of 0.02 warranted a sample size of 287. In order to fulfill the principle of sample sufficiency researcher opted to retain all the usable 310 data records.

5.2 Profile of the respondents

The number of software professionals who took part in the research in Kochi and Thiruvananthapuram are given in the table 5.2. Detailed explanation of the profile of the respondents is provided below.

Table 5.2. Details of the respondents

Location	Number of Software professionals	percent
Kochi	75	24.2%
Thiruvananthapuram	235	75.8 %
Total	310	100%

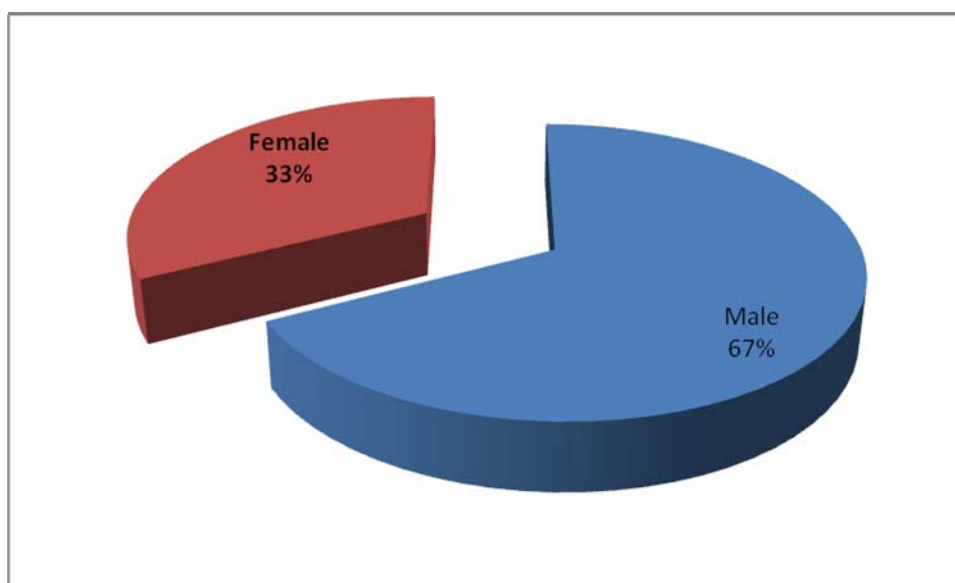
The table 5.2 above shows that majority of the respondents are from Technopark, Thiruvananthapuram which amounts to three fourth of the total number of software professionals. Infopark Park, Kochi is relatively much younger to Technopark, Thiruvananthapuram in terms of its year of inception. Hence there are more firms in Thiruvananthapuram than in Kochi that fulfill the inclusion criteria for the population of this study. Moreover software professionals working in firms outnumber in Thiruvananthapuram than in Kochi.

5.3 Classification of software professionals based on Gender

Gender may influence performance in three ways: (1) gender role prescriptions influence expectations of differential behavior between males and females; (2) within each gender category, gender orientation (masculinity/

femininity) leads to self-identifying with socially prescribed gender roles; and (3) occupational segregation and gender stereotyping result in gender-typed behavioral expectations for gender-typed occupations (Kiddler, 2001). Out of the 310 respondents, 209 were men and the remaining 101 were women. The details are given in the figure 5.1 given below.

Fig. 5.1. Classification details based on the gender of software professionals



Gendered studies of software production in developing countries have been relatively few and far. However, more general studies for example in India have shown how social and cultural factors play a significant role in the progress of women into science and engineering, which includes software production (Mukhopadhyay & Seymour, 1994). In Kerala, Information and Communication Technologies (ICT) have been seen as an engine for growth, particularly through ICT production in the form of software development that will lead to a growth in jobs, incomes, skills and investment, and a reduction in out-migration of skilled workers.

The ability of women to participate in the labour market on equal terms with men will affect significantly the outcome of ICT-based macro policies in terms of equality, efficiency and justice. Although they are equally qualified and equally capable, women do not appear to compete on equal terms, even in a state with a strong history of women's development and even in a modern 'high-tech' sector (Arun & Arun, 2001)

5.4 Classification of software professionals based on age

Age is classified into three categories and data collection was done on the basis of these categories. Majority of the respondents come under 25-30 age category and the remaining comes under the other two categories namely under 25 years and 31-40 years. The classification details are given in the table shown below.

Table 5.3. Age Group classification of software professionals

	Frequency	Percent
Less than 25	52	16.7
25-30	189	61.0
31-40	69	22.3
Total	310	100.0

This table shows about two third of the total sample fall under the category of 25-30 years age group and the other one third falls into the two categories of less than 25 years and age group category between 31-40 years age group. In the study conducted by Abraham, (2007) age of the worker is proxy of his/her experience, his/her learning by doing and professional network that can be taken to be an explanatory variable. As the age of the employee increases the experience and skill sets also increases which helps in up gradation and acquisition of new skill sets also.

The relatively younger employees, in the age group of less than 30 years, who form the bulk of the workforce in software firms, are difficult to be retained on account of the sourcing competition that prevails in the industry. HR Practices may have to be innovative and challenging so as to attract and retain such employees.

5.5 Classification of software professionals based on Education Qualification

The data collection was done among the employees who came from different educational backgrounds. They were categorized into four groups on the basis of their qualifications and the researcher came to know that most of the respondents have technical background. The classification details based on educational qualification are given in the figure 5.2.

Fig. 5.2. Education qualification of software professionals

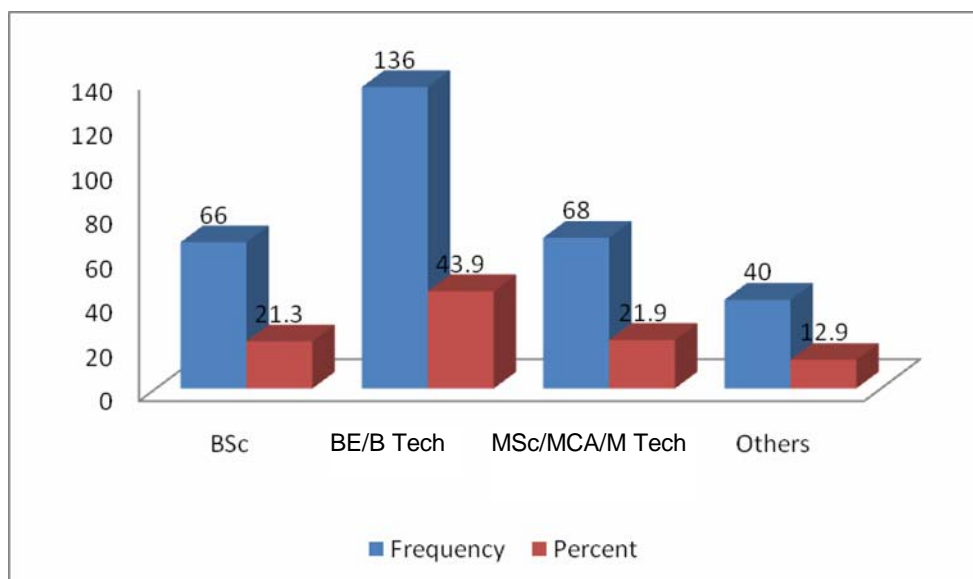


Figure 5.2 shows that there is comparatively large representation of Technical graduate employee (43.8%) than non technical employees (21.3%)

and post graduate employees (22.9%). Others include Diploma, ITC/ITI etc which form around 12.9% of the population. Abraham (2007) found that the basic education skill in engineering related to computer is preferred by the employer for it is easy to impart continuous skill up gradation by on-job training, knowledge and skill acquisition for the employees having the basic knowledge of engineering concept related to computer. According to Fuller and Narsimhan (2006) important fact pertains to the critical significance of social and cultural capital surfacing in the guise of “communication skills” that is predominantly vested in the educated, professional, urban middle class. The software companies are largely uninterested in how much engineering knowledge the graduates actually possess but encourage more learning of analytical skills.

5.6 Classification of software professionals based on Tenure

The data collection was done among the employees who had different tenures. They were categorized into four groups on the basis of their number of years and the researcher came to know that half of the respondents have an experience below 2 years.

Table 5.4. Classification based on tenure of software professionals

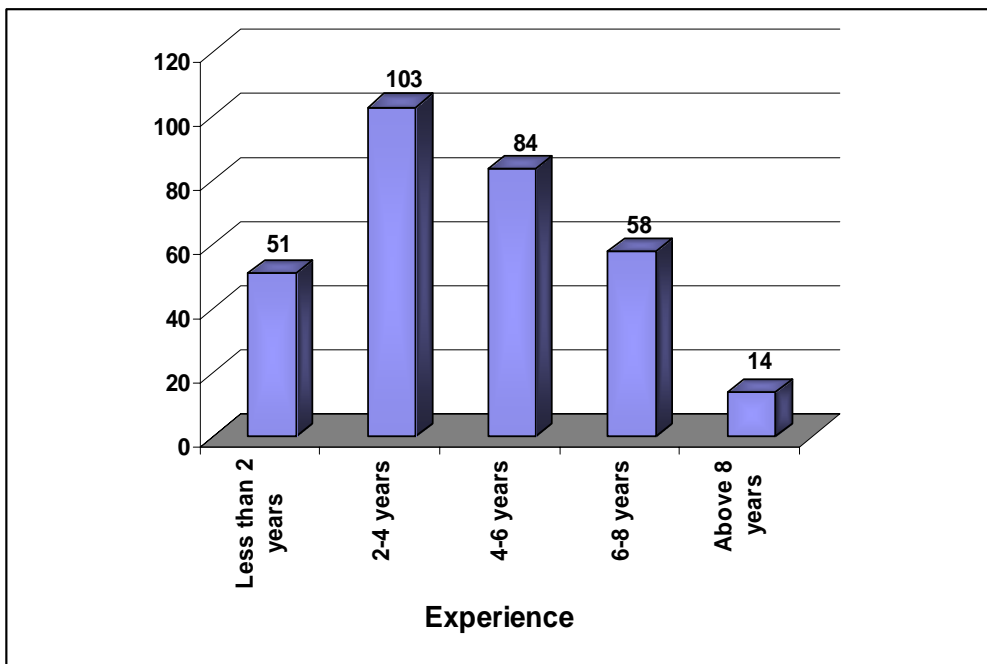
	Frequency	Percent
Less than 1	82	26.4
1-2 years	126	40.8
2-3 years	45	14.5
Above 4 years	57	18.3
Total	310	100

According to the study conducted by Abraham, (2007), about 66 % of the employees employed in firms in Technopark Thiruvananthpuram had

worked only for less than two years in these firms mainly due to the high inter firm rivalry between the organisations vying for the skilled and experienced labour.

5.7 Classification of software professionals based on Experience

Fig. 5.3. Classification based on experience of software professionals



The data collected also covered the experience levels of the respondents. They were categorized into five groups on the basis of their experience in number of years. The data reveals that half of the respondents has experience below 4 years.

To sum up, the above demographic analyses show that there is a comparatively large representation of male employees than female employees and also that technical graduates makes the major portion of the human resource in software companies. The majority of the software professionals is below thirty

years of age and has tenure of only less than two years in these software firms. Most of them have total professional experience of less than four years

5.8 Perception on Innovative HR Practices

The study is based on dimensions of Innovative HR Practices; such as perceived importance of Innovative HR practices, extent of introduction of Innovative HR practices and satisfaction of the Innovative HR practices. These aspects are put for various analyses. The table 5.8 shows mean and standard deviations of all the dimensions of innovative HR practices included in the study.

Table 5.5. Descriptive Statistics for different Innovative HR practices aspects in the study

Variables	Mean	Std. Deviation	N
Importance of IHRP	3.15	.492	310
Introduction and initiation of IHRP	3.05	.911	310
Satisfaction of IHRP	2.49	.431	310

The table shows the mean scores given by the respondents for each of the outcome variables out of the possible maximum score of 4. Variance and standard deviation show the spread of the data. Means of all variables are on the higher scale and variance on the lower. Higher means and lower level of standard deviation of the scores indicate that the respondents have understood the questions in the same way and the questions have been answered properly.

The table 5.5 shows that the perception on the introduction of IHRPs has greater mean but also have greater standard deviation, whereas scores of satisfaction of the Innovative HR practices have lower standard deviation and lower mean scores as compared to other two dimensions. The

best spread of the data is in the case of the perceived importance of innovative HR practices where mean is higher and the standard deviation is also higher.

Zaltman et al. (1973) found two important dimensions of attitudes which organizational members could exhibit that are reflective of acceptance of innovations. First is *openness to the innovation* consisting of (1) members' willingness to consider the innovation, (2) whether they are skeptical about the innovation, (3) whether they feel the innovation will improve how the organization carries out its function. Second is members' perception of potential for the innovation.

5.9 Effect of Background variables on perception of IHRP

The anticipation of the clusters and spread of the perception scores on the dimensions of IHRPs had led the researcher to suggest H1 and the same was explained by putting the hypothesis to test.

This section presents the results of the hypotheses tests. t-test and one way ANOVA were used for testing hypothesis H1 which were about the influence of Gender, Age categories, Educational qualification, Tenure and Experience on Innovative HR practices. H1 was stated as:

H1: There is significant difference in perceived importance, extent of introduction of Innovative HR Practices and satisfaction with the Innovative HR practices with Gender, Age, Educational Qualification, Tenure and Experience of the employees.

The null hypothesis that the perceived importance, extent of introduction and the satisfaction of the Innovative HR Practices do not vary across categories of Gender, Age, Educational Qualification, Tenure and

Experience of the software employees was tested statistically and the results are reported below.

Table 5.6. t-test results for Gender and Innovative HR Practices.

		Gender			df	sig
		Male	Female	Total		
		Mean				
Innovative HR Practices	Importance of IHRP	4.10	3.97	4.035	307	.532
	Introduction and initiation of IHRP	4.22	3.05	3.635	307	.341*
	Satisfaction of IHRP	3.98	3.99	3.985	307	.212

(*:indicates items significant at 5% significance level)

The above table 5.6 shows the t-test results done on Innovative HR Practices with the gender. The result showed that the values are not significant at 5% level. Thus the employees in software companies perceive the importance, introduction and extent of satisfaction of Innovative HR Practices similarly not withstanding their difference in gender.

According to Upadhya and Vasavi (2006) although some managers acknowledge these structural and social constraints on women's careers in IT, they maintain the stance of gender neutrality. But by arguing that they do not distinguish between men and women in selection or promotions, they are able to throw responsibility for stagnation or failure back onto the individual employee. Women tend to quit their jobs after they get married and fewer women reach the project manager level. But women had slower career growth due to internal reasons.

Table 5.7. One-way ANOVA results for Age Group with Innovative HR practices

		Sum of Squares	df	Mean Square	F	Sig.
Importance of IHRP	Between Groups	1.886	2	.943	1.875	.274
	Within Groups	157.925	307	.514		
	Total	159.811	309			
Introduction and initiation of IHRP	Between Groups	6.224	2	3.112	5.186	.043*
	Within Groups	188.395	307	.614		
	Total	194.618	309			
Satisfaction of IHRP	Between Groups	2.484	2	1.242	2.003	.030*
	Within Groups	194.709	307	.634		
	Total	197.192	309			

(*indicates items significant at 5% significance level)

The above table 5.7 shows the ANOVA table on the analysis for IHRP across age group. From the above table it is found that perception regarding the importance of innovative HR Practices does not differ with age group of the employees in the companies. Variation for the remaining two factors i.e. Introduction and Satisfaction of IHRP was found to be significant at 5% level. Therefore age of employees does not affect their perception on the importance of IHRP and affect their perception in terms of in Introduction and extent of satisfaction of IHRP with respect to age group. The error bar diagram (Fig.5.4) shown below also collaborates the above analysis.

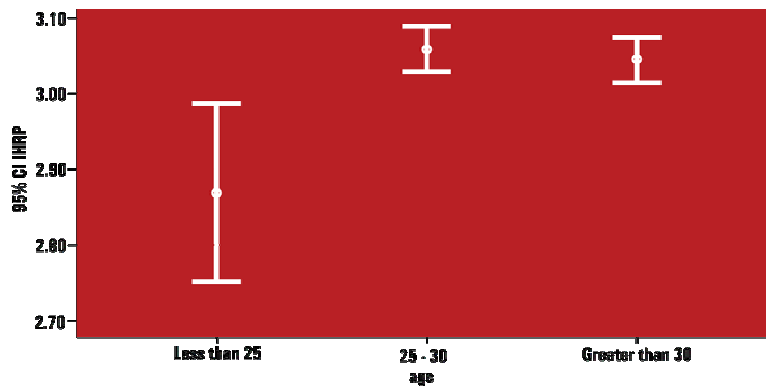
Fig.5.4. Error Bar diagram for Innovative HR practices vs. Age Group

Table 5.8. One-way ANOVA results for Educational Qualification and Innovative HR Practices

		Sum of Squares	df	Mean Square	F	Sig.
Importance of IHRP	Between Groups	2.125	3	.708	1.528	.372
	Within Groups	218.355	306	.714		
	Total	220.479	309	.714		
Introduction and Initiation of IHRP	Between Groups	5.107	3	1.702	4.666	.029
	Within Groups	171.814	306	.561		
	Total	176.921	309	.573		
Satisfaction of IHRP	Between Groups	1.392	3	.464	1.179	.006
	Within Groups	185.378	306	.606		
	Total	186.770	309	.604		

(*indicates items significant at 5% significance level)

The above table 5.8 shows the analysis results of IHRP against educational qualification. As the perception of importance of IHRP shows a value which is not significant, it revealed that it had no difference with respect to educational qualification among the employees in the companies. But the other factors i.e. introduction and extent of satisfaction showed significant values and it resulted in significant difference with respect to the employee’s educational qualifications.

Table 5.9. One - way ANOVA results for Tenure and Innovative HR Practices

		Sum of Squares	df	Mean Square	F	Sig.
Importance of IHRP	Between Groups	7.125	3	2.375	5.008	.148
	Within Groups	223.380	306	.730		
	Total	230.505	309			
Introduction and initiation of IHRP	Between Groups	2.875	3	.958	1.928	.040*
	Within Groups	234.103	306	.765		
	Total	236.978	309			
Satisfaction of IHRP	Between Groups	5.838	3	1.946	5.643	.019*
	Within Groups	162.421	306	.531		
	Total	168.259	309			

(*indicates items significant at 5% significance level)

The above table 5.9 shows the analysis results of IHRP with Tenure. As the perceived importance of IHRP showed a value which is not significant, it revealed that there is no difference with respect to Tenure among the employees in the companies. But the other factors i.e. extent of introduction and extent of satisfaction shows significant values and it resulted in significant difference with respect to the employee's tenure with the company.

Table 5.10. One - way ANOVA results for Experience and Innovative HR Practices

		Sum of Squares	df	Mean Square	F	Sig.
Importance of IHRP	Between Groups	10.857	4	2.714	3.077	.017
	Within Groups	275.193	305	.902		
	Total	286.050	309	.926		
Introduction and initiation of IHRP	Between Groups	12.194	4	3.048	4.995	.001
	Within Groups	190.418	305	.624		
	Total	202.612	309	.656		
Satisfaction of IHRP	Between Groups	34.512	4	8.628	17.181	.000
	Within Groups	156.680	305	.514		
	Total	191.192	309	.619		

(*indicates items significant at 5% significance level)

The above table 5.10 shows the analysis results of IHRP against Experience. As the perceived importance of IHRP showed a value which is not significant, it revealed that there is no difference in the perceived importance of IHRP with respect to experience of the employees. But the other factors i.e. Introduction and extent of satisfaction show significant values and reflect significant differences with respect to the employee's experience in the organisation.

Divergent perspectives and self-serving perceptions by multiple constituencies have already been found in earlier researches. In the human

resources area, Tsui (1987) and Tsui & Milkovich (1987) found that employee preferences and expectations differed among various constituencies. Johns (1993) found a clear self-serving pattern with divergent perspectives between employees and managers. Multivariate effects of demographic variables such as age, gender, race, education, hierarchy, and job tenure have also been examined and found to exist (Kossek, 1989; Tsui & O'Reilly, 1989).

To sum up, the above analyses of background variables like gender, age, education, experience and tenure on the perception of the various dimensions of IHRP shows that the employees in software companies perceive the importance, introduction and extent of satisfaction of innovative HR practices equally not withstanding their difference in gender, whereas age, educational qualification, experience and tenure of employees did not affect their perception on the importance of IHRP. These factors affected their perception in terms of the extent of introduction and satisfaction of IHRP.

5.10 HR outcome variables of the study

The present study is emphasizing on the effect of IHRP on selected HR outcomes. The selected HR outcome variables studied included job satisfaction, organisational commitment and organisational citizenship behaviour. The following paragraph presents the differences of perceptions of the respondents on the selected HR outcomes.

Table 5.11. Descriptive Statistics for selected HR outcome variables of the study

Variables	Mean	Std. Deviation	N
Job Satisfaction	5.28	.963	310
Organizational Commitment	5.09	.858	310
Organizational Citizenship Behaviour	4.93	.676	310

The table 5.11 shows mean and standard deviations of the selected HR outcome variables included in the study. The table shows the mean scores given by the respondents for each of the outcome variables out of a possible maximum score of 7.

The anticipation of the relationships among the selected HR outcomes variables prompted the researcher to look for the influence of variations in their perception on IHRP on the various sub dimensions of HR outcome variables. Researcher analysed the relationship between this sub dimensions of job satisfaction, organisational commitment and organisational citizenship behaviour across high and low perception on IHRP.

The sub dimensions of Job Satisfaction used in this study are supervisory satisfaction, co-worker satisfaction, personal growth satisfaction, and job security and compensation.

Table 5.12. ‘t’ test results of Innovative HR practices and Job Satisfaction

Innovative HR practices						
		LOW	HIGH	Total	df	sig
		Mean				
Job satisfaction	JS- Supervisory satisfaction	3.1172	4.128	3.6537	307	.000*
	JS-Co-workers satisfaction	3.1241	4.1768	3.6828	307	.010*
	JS-Personal growth and satisfaction	3.131	4.1341	3.6634	307	.003*
	JS- Job security and compensation	3	4.061	3.5631	307	.000*

(*indicates items significant at 5% significance level)

Table 5.12 presents the t-test results for the difference between the mean scores on the sub dimension of job satisfaction across high and low perception on IHRP. The t test results establish attestable differences of the two groups on all the sub dimension of job satisfaction.

Earlier studies also suggest that employee perceptions of benefits from the innovative HR practices affect attitudes towards all the dimensions of job satisfaction. It was found that innovations which are linked to the needs of the employees and the organization were more likely to become accepted and utilized (Kossek, 1989, 1990).

Table 5.13. ‘t’ test results of Innovative HR practices and Organisational Commitment

		Innovative HR practices				
		LOW	HIGH	Total	df	sig
		Mean				
Organisational Commitment	OC- Affective Commitment	2.9172	3.9451	3.4628	309	.009*
	OC- Continuance Commitment	3.0621	3.872	3.4919	309	.001*

(*indicates items significant at 5% significance level)

Affective Commitment and Continuance Commitment are the sub dimensions used for organisational commitment. Similar analyses on the sub dimension of organizational commitment revealed useful results. Table 5.14 shows the t-test results for the difference of mean scores on the organisational commitment across high and low values on the perception on IHRP. Results establish significant differences between the two groups on the two sub dimensions of organisational commitment namely, affective commitment and continuance commitment. Similar notions were offered by Zomitsky (1995) when he described that HR practices contributed to the economic success of an organization through enhanced employee commitment and satisfaction.

Analysis of relationship between sub dimensions of organisational citizenship behaviour across variations on the perception on IHRP also

yielded comparable results. Sub dimensions of organisational citizenship behaviour used were OCB individual and OCB organizational.

Table 5.14. ‘t’ test results of Innovative HR practices and Organisational Citizenship Behaviour

		Innovative HR practices				
		LOW	HIGH	Total	df	sig
		Mean				
Organisational Citizenship Behaviour	Organisational Citizenship Behaviour- Organisational	2.7862	3.1585	2.9838	309	.000*
	Organisational Citizenship Behaviour- Individual	3.2	4.0671	3.6602	309	.000*

(*indicates items significant at 5% significance level)

Table 5.14 depicts the t-test results for the difference of mean scores on organisational citizenship behaviour across high and low scores on the perception on IHRP. The t test results show significant differences between the two groups on the two sub dimensions of organisational citizenship behaviour.

Innovative HR practices influences the minds of the employees which produce higher level of job satisfaction and motivates the employees to be committed towards the organisation (Smith, 1983; Schnake et.al., 2003). Innovative HR practices influence the Organisational Citizenship Behaviour because higher levels of the citizenship behaviour performance tend to enhance the supportive environment of the organisation which in turn enhances the Organisational Citizenship Behaviour.

Clusters and spread of the scores on the dimensions of IHRPs like importance, extent of introduction and satisfaction were thought to have influence on the sub dimensions of the selected HR outcome variables.

Score variations on IHRP dimension and the sub dimensions of each of the outcome variables are incorporated to form hypotheses H2, H3 & H4 and were tested. Hypotheses H5, H6 and H7 attributed linkages among the outcome variables themselves.

5.11 Impact of Perception of IHRP on Job Satisfaction

The hypothesis H2 that higher the perceived importance, extent of introduction and extent of satisfaction with the Innovative HR practices, higher is the employee level of Job satisfaction was checked with regression analysis.

Analyses clearly convey that the aspect of perceived importance of innovative HR practices has no effect on job satisfaction of the employees at 5% level of significance. Regression analysis further reveals that perceived extent of introduction and satisfaction levels of IHRP contribute towards creation of job satisfaction. Innovative HR practices have strong positive effect on the creation of job satisfaction among the employees except for the sub dimension of perceived importance of IHRP.

Table 5.15. Multiple regression analysis results for Innovative HR Practices with Job Satisfaction

Variables	Beta Value	Std Error	Collinearity		Sig.	Durbin-Watson	R	R2
			Tolerance	VIF				
Importance of IHRP	0.153	0.216	0.528	1.894	0.47	1.739	0.571	0.326
Introduction of IHRP	1.529	0.395	0.906	1.103	0.01*			
Satisfaction of IHRP	1.476	0.281	0.527	1.898	0.00*			

(* indicates items significant at 5% significance level)

Assumptions for the regression analysis were tested using the multicollinearity test, Durbin-Watson coefficient, histogram and scattered diagram for verifying the multicollinearity, autocorrelation and homoscedasticity of the regression analysis. From table 5.15 it is noted that all the values of VIF

(Variance Inflation Factor) are fewer than 5, suggesting the absence of high multicollinearity. The Durbin-Watson coefficient was given as 1.739 showing no significant autocorrelation.

Fig. 5.5. Histogram error plot for Job Satisfaction

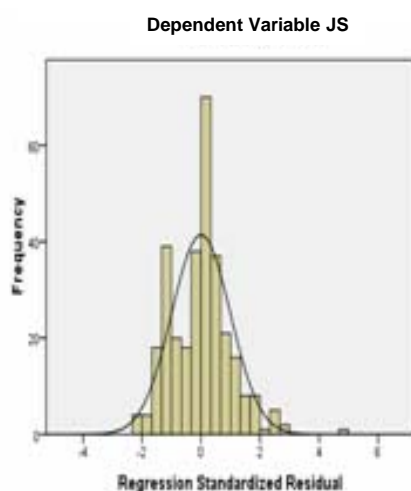
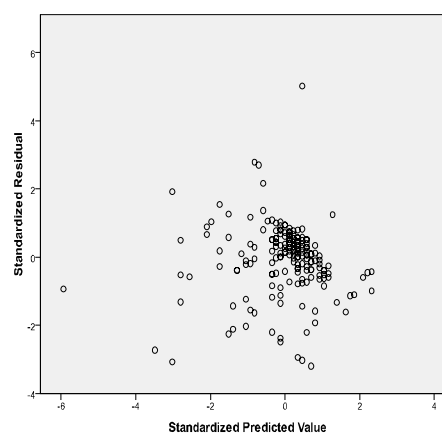


Fig. 5.6. Scatter diagram for Job Satisfaction



The figure 5.5 above show the histogram of standardized residuals which produce a roughly normal curve indicating normally distributed residual error. In the figure 5.6 scatter plot of the dependent variable job satisfaction show no significant pattern for data points hence the regression model could be considered as homoscedastic. Thus all the four important assumptions for regression analysis hold good.

Further, table 5.15 shown above with the values obtained from regression analysis, at 5% significance level, support the hypothesis that there is positive relation between the sub dimensions of the independent variable and the dependent variable except in one sub dimension i.e. importance of IHRP. Extent of introduction and satisfaction of innovative HR Practices have strong positive relation on job satisfaction of the employees.

To quote similar earlier observations, Mohr (1969) contends that willingness to innovate is not enough; individuals must be impelled to innovate and resources for innovation need to be available. This suggests that even if resources are available, there must be congruence between the innovation and the individual's attitude toward it. In a more recent study, Sillince & Harindranath (2001) found some empirical support for the argument that garnering acceptance for radically new working practices requires congruence between the innovation and the employee's attitude toward the innovation. Acceptance of human resources management innovations may also be affected by perceptions about the benefits of the innovation to the employees themselves as well as to the organization. Some researchers maintain that innovative practices that are congruent with employee needs and values will aid the acceptance of the human resource management innovation implemented (Dowling & Schuler, 1989; Gilbert, 1994; Rousseau, & Wade-Benzoni, 1994; Van Buren & Leana, 2000).

Regression results that only the introduction and satisfaction levels on IHRP affect the creation of job satisfaction among the employees and not the perception on the importance of IHRP encouraged further detailed multivariate regression analysis of each of the dimension of IHRP with the sub dimensions of the outcome variables.

Table 5.16 show the results of multivariate regression analysis supporting the findings of the earlier multiple regression results that established the contribution of the introduction and satisfaction aspects of IHRP with the creation of all aspects of job satisfaction. The current analysis additionally clarifies that the perceived importance of IHRP affects only one sub dimension of job satisfaction namely personal growth and satisfaction, leaving three remaining sub dimensions unaffected.

Table 5.16. Multivariate regression analysis results for difference between the factors of Innovative HR practices and Job Satisfaction

Effect		Type III Sum Of Squares	df	Error df	Mean Square	F	Sig.
Importance of IHRP	Supervisor satisfaction	7.450	18	1.713	.414	3.848	.057
	Co worker satisfaction	8.795	18	1.689	.489	4.520	.062
	Personal growth satisfaction	7.792	18	1.762	.433	2.636	.049*
	Job security and compensation	10.154	18	1.698	.564	4.097	.060
Introduction of IHRP	Supervisor satisfaction	12.678	21	2.498	.604	4.156	.002*
	Co worker satisfaction	31.537	21	5.191	1.502	2.366	.000*
	Personal growth satisfaction	13.438	21	2.604	.640	5.248	.001*
	Job security and compensation	24.034	21	3.446	1.144	7.052	.000*
Satisfaction of IHRP	Supervisor satisfaction	19.729	23	3.549	.858	8.896	.000*
	Co worker satisfaction	24.422	23	3.671	1.062	7.497	.000*
	Personal growth satisfaction	21.894	23	3.874	.952	1.156	.000*
	Job security and compensation	25.902	23	3.391	1.126	4.556	.000*

(* indicates items significant at 5% significance level)

Studies have revealed that a significant relationship exists between IHRP and job satisfaction (Organ & Lingl, 1995). The literature additionally underlines the fact that there is strong positive relation for IHRP with employees' job satisfaction in software companies. It says that Job satisfaction is one of the most prominent correlates of HR Practices (Bateman & Organ, 1983, Preffer, 1987, Organ & Konovsky, 1989). An HR practice inculcates in employees a positive state of mind (Smith, 1983) which in turn motivates them to repay their organization (Schnake et. al., 2003). Positive beneficial

actions directed at employees by the organization create an impetus for employees to reciprocate in positive ways through their attitudes and/or behaviors (Coyle et al. 2004) which result in the increased job satisfaction level. Thus the finding of the present study is supported very well by the findings of earlier researches and existing literature.

5.12 Impact of Perception of IHRP on Organisational Commitment

The acceptability of H3 that higher the perceived importance, extent of introduction of innovative HR practices and satisfaction with the Innovative HR practices, higher will be the organisational commitment was checked with multivariate regression analysis for the sub dimensions of IHRP on the sub dimensions of organisational commitment.

Analyses clearly convey that the aspect of perceived importance of innovative HR practices has no effect on organisational commitment of the employees at 5% level of significance. Regression analysis further reveals that perceived extent of introduction and satisfaction levels of IHRP contribute towards creation of organisational commitment. Innovative HR practices have strong positive effect on the creation of organisational commitment among the employees except for the sub dimension of perceived importance of IHRP.

Table 5.17. Multiple regression analysis results for Innovative HR Practices with Organisational Commitment

Variables	Beta Value	Std Error	Collinearity		Sig.	Durbin-Watson	R	R ²
			Tolerance	VIF				
Importance of IHRP	0.043	0.102	0.528	1.894	0.970	1.758	.710	.504
Introduction of IHRP	0.620	0.146	0.906	1.103	0.000*			
Satisfaction of IHRP	1.039	0.109	0.527	1.898	0.000*			

(*indicates items significant at 5% significance level)

Assumptions for the regression analysis were tested using the multicollinearity test, Durbin-Watson coefficient, histogram and scattered diagram for verifying the multicollinearity, autocorrelation and homoscedasticity of the regression analysis. From table 5.17 it is noted that all the values of VIF (Variance Inflation Factor) are fewer than 5, suggesting the absence of high multicollinearity. The Durbin-Watson coefficient was given by 1.758 showing no significant autocorrelation.

Fig. 5.7. Histogram plot for Organisational Commitment

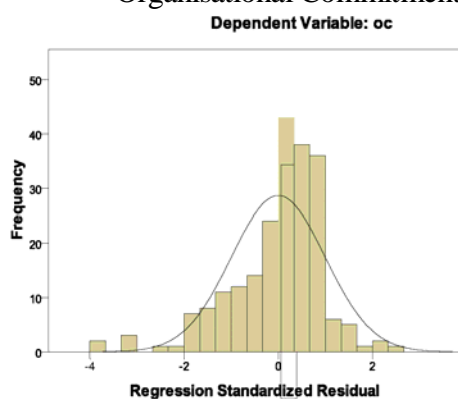
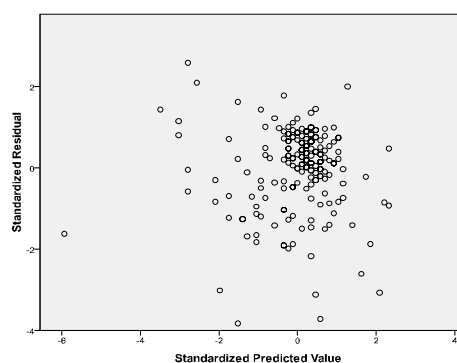


Fig. 5.8. Scatter diagram for Organisational Commitment



The figure 5.7 above show scatter plot of the dependent variable job satisfaction show no significant pattern for data points hence the regression model could be considered as homoscedasticity. Further figure 5.8 show the histogram of standardized residuals which produce a roughly normal curve indicating normally distributed residual error. Thus all the four important assumptions for regression analysis holds good.

Further, table 5.17 shown above with the values obtained from regression analysis, at 5% significance level, support the hypothesis that there is positive relation between the sub dimensions of the independent variable organisational commitment and the dependent variable except in one sub dimension i.e.

importance of IHRP. Extent of introduction and satisfaction of innovative HR Practices have a strong positive relation on organisational commitment of the employees.

The three sub dimensions of innovative HR practices are analyzed with two sub dimensions of organizational commitment i.e. affective commitment and continuance commitment. Multivariate regression analysis is done for finding the relations between these two variable sets. The results are presented in the table 5.18

Table 5.18. Multivariate regression analysis results for difference between the factors of Innovative HR practices and organisational commitment

Source	Dependent Variable	Type III Sum of Squares	df	Error df	Mean Square	F	Sig.
Importance of IHRP	Affective commitment	6.843	18	1.689	.380	3.848	.000*
	Continuance commitment	17.923	18	1.762	.996	7.052	.000*
Introduction of IHRP	Affective commitment	18.334	21	2.604	.873	8.836	.000*
	Continuance commitment	13.333	21	3.446	.635	4.497	.000*
Satisfaction of IHRP	Affective commitment	11.717	23	3.671	.509	5.156	.000*
	Continuance commitment	23.921	23	3.874	1.040	7.366	.000*

(* indicates items significant at 5% significance level)

This table 5.18 shows that there is a significant difference for all the sub dimensions of the innovative HR practices (Importance, Introduction, and satisfaction of IHRP) on the sub dimensions of the organisational commitment (affective commitment and continuance commitment) because the significance values are below 0.05. From the above table it is observed

that all the values are significant at 5% significance level showing a significant relation between the two variables. Thus the null hypothesis of no positive relation between innovative HR practices and organisational commitment is rejected by supporting the alternate hypothesis that higher the perceived introduction, extent of importance and extent of satisfaction of the innovative HR practices higher affective and continuance Organisational Commitment among the employees.

Meyer and Allen (1990) found that employees with a strong personal attachment and identification to the company continue employment. This is called affective commitment and that which arise from the obligation due to social pressures constitute continuance commitment and both give rise to Organisational Commitment which is strongly related to Innovative HR Practices. Studies show that employees' commitment to the organization is a function of their perception of the people orientedness of the organisation. The perception that the organisation was action-oriented with respect to the extent of introduction of HR innovations is likely to enhance employee beliefs about the commitment of the management of their organisation to the human resources of the organisation. This, in turn, is likely to lead to higher identification with the values of their organisation. By promoting new HR practices, an organisation provides the signal that its human resources are worthy of the firm's investment, attention and time (Gilley, 2001).

Hiltrop (1994) suggests measures to evaluate the effectiveness of HR practices and that one way could be via the positive impact of HR on commitment. Zomitsky (1995) stated that HR practices contributed to the economic success of an organisation through enhanced employee commitment and satisfaction. Benkhoff (1997) conducted a study to explore the proposed link between HRM characteristics and their relationships to employee satisfaction,

intention to stay and organisational performance. Organisational commitment emerged as the central variable that was closely related to work satisfaction and intention to stay and, most important, made a significant contribution to performance of the firm. Thus the finding of the present study is also supported very well by the findings of earlier research and existing literature.

5.13 Impact of Perception of IHRP on Organisational Citizenship Behaviour

The hypotheses H4 that ‘the perceived importance, extent of introduction of innovative HR practices and satisfaction with the Innovative HR practices are positively related to the level of organisational citizenship behaviour’ was checked with multivariate regression analysis for the sub dimensions of IHRP on the sub dimensions of organisational citizenship behaviour.

Analysis clearly conveys that the aspect of perceived importance of innovative HR practices has no effect on organisational citizenship behaviour of the employees at 5% level of significance. Regression analysis further reveals that perceived extent of introduction and satisfaction levels of IHRP contribute towards creation of organisational citizenship behaviour. Innovative HR practices have strong positive effect on the creation of organisational citizenship behaviour among the employees except for the sub dimension of perceived introduction of IHRP.

Table 5.19. Multiple regression analysis results for Innovative HR Practices with Organisational Citizenship Behaviour

Variables	Beta value	Std error	Collinearity		Sig.	Durbin-Watson	R	R ²
			Tolerance	VIF				
Importance of IHRP	0.249	0.136	0.528	1.894	0.67	1.758	.710	.504
Introduction of IHRP	0.380	0.095	0.906	1.103	0.00*			
Satisfaction of IHRP	0.579	0.101	0.527	1.898	0.00*			

(*indicates items significant at 5% significance level)

Assumptions for the regression analysis were tested using the multicollinearity test, Durbin-Watson coefficient, histogram and scattered diagram for verifying the multicollinearity, autocorrelation and homoscedasticity of the regression analysis. From table 5.19 it is noted that all the values of VIF (Variance Inflation Factor) are fewer than 5, suggesting the absence of high multicollinearity. The Durbin-Watson coefficient was given by 1.885 showing no significant autocorrelation.

Fig. 5.9. Histogram plot for Organisational Citizenship Behaviour

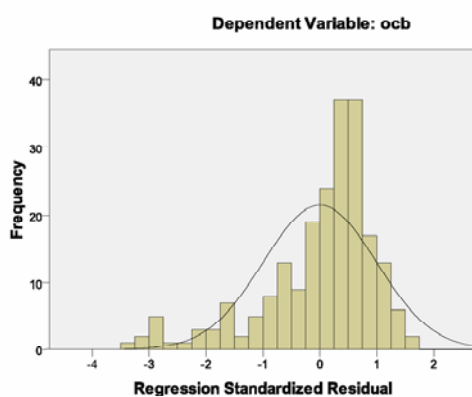
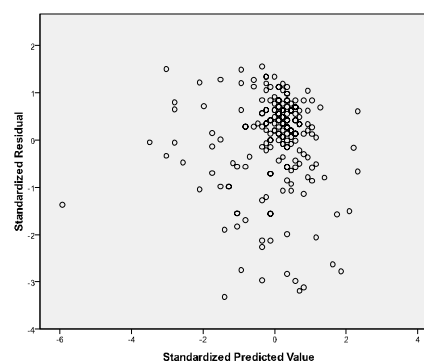


Fig. 5.10. Scatter diagram for Organisational Citizenship Behaviour



The figure 5.9 above show the histogram of standardized residuals which produce a roughly normal curve indicating normally distributed residual error. In the figure 5.10 scatter plot of the dependent variable organisation citizenship behaviour show significant pattern for data points hence the regression model could be considered as homoscedastic. Thus all the four important assumptions for regression analysis hold good.

Further table 5.19 shown above with the values obtained from regression analysis, at 5% significance level, support the hypothesis that there is positive relation between the sub dimensions of the independent variable and the

dependent variable except in one sub dimension i.e. importance of IHRP. Extent of introduction and satisfaction of innovative HR Practices have a strong positive relation on organisational citizenship behaviour of the employees.

The three sub dimensions which constitute IHRP are checked with the two sub dimensions of OCB i.e. OCB Individual and OCB Organisational using multivariate analysis and the results are displayed in the table below.

Table 5.20 shows that there is a significant difference for all the dimensions of the Innovative HR practices (importance, introduction, and satisfaction of IHRP) on the dimension of the organisational citizenship behaviour organisational citizenship behaviour (individual) and organisational citizenship behaviour (organisational) depicted by all the significance values falling below 0.05.

Table 5. 20. Multivariate regression analysis results for the factors of Innovative HR practices and Organisational Citizenship Behaviour

Source	Dependent Variable	Type III Sum of Squares	df	Error df	Mean Square	F	Sig.
Importance of IHRP	Organisational Citizenship Behaviour Individual (OCBI)	11.001	18	1.698	.611	2.370	.005*
	Organisational Citizenship Behaviour Organisational (OCBO)	8.456	18	2.498	.470	2.576	.003*
Introduction of IHRP	Organisational Citizenship Behaviour Individual (OCBI)	15.587	21	5.191	.742	2.878	.000*
	Organisational Citizenship Behaviour Organisational (OCBO)	10.595	21	2.604	.505	2.766	.001*
Satisfaction of IHRP	Organisational Citizenship Behaviour Individual (OCBI)	21.675	23	3.446	.942	3.655	.000*
	Organisational Citizenship Behaviour Organisational (OCBO)	7.743	23	3.549	.337	1.846	.027*

(*indicates items significant at 5% significance level)

From the table 5.20 it can be inferred that all the values are significant at 5% significance level showing a significant relation between the two variables leading to the acceptance of hypothesis that importance, introduction and extend of satisfaction of the innovative HR practices are positively related to employees organisational citizenship behaviour.

Podsakoff et al. (2000) show that levels of citizenship performance tend to be enhanced in organizations that set group goals, demonstrate a high degree of justice, design jobs to be intrinsically satisfying and have leaders who provide a supportive environment and who themselves exhibit a citizenship behaviour. According to Moorman (1991), OCB consists of a great variety of behaviors, only some of which may be performed within the view of the supervisor. Therefore it becomes even more difficult for supervisors to exactly know what enhances citizenship behaviour among their subordinates. This result linking IHRP and OCB will therefore be of great use to them. Several researchers have begun to recognize that individuals may engage in OCB for different reasons or motives because they want to promote the welfare of others, or the organization, or that they may do so as a form of political influence in an effort to help them. This study underlines the involvement of innovative HR practices for enhancing the organisational citizenship behaviour that will be very much helpful for every organisation.

5.14 Relationships among Outcome Variables

The possible relationships among the selected HR outcome variables have been explored in terms of the sub dimensions of job satisfaction, organisational commitment and organizational citizenship behaviour.

5.14.1 Impact of Job Satisfaction on Organisational commitment

The acceptability of the H5 that there is exist positive relation between Job Satisfaction with Organisational Commitment is tested using Multivariate Regression Analysis with the sub dimensions of Job Satisfaction on the sub dimensions of Organisational Commitment and the results are displayed in the table given below.

Table 5.21. Multivariate Regression Analysis results for Job Satisfaction with Organisational Commitment

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Error df	Mean Square	F	Sig.
Job Security and Compensation	Affective Organizational Commitment	13.428	19	1.713	.707	2.285	.002*
	Continuance Organizational Commitment	18.312	19	1.689	.964	2.398	.001*
Co-Workers Satisfaction	Affective Organizational Commitment	11.588	13	1.762	.891	2.520	.003*
	Continuance Organizational Commitment	13.077	13	1.698	1.006	1.691	.044*
Personal Growth and Satisfaction	Affective Organizational Commitment	15.935	18	2.498	.885	2.862	.000*
	Continuance Organizational Commitment	31.252	18	5.191	1.736	4.320	.000*
Supervisory Satisfaction	Affective Organizational Commitment	18.711	13	1.742	1.439	4.070	.000*
	Continuance Organizational Commitment	29.036	13	1.398	2.234	3.754	.000*

(*indicates items significant at 5% significance level)

The above table No.5.21 shows the results obtained from the Multivariate analysis of job satisfaction on organisational commitment. All the

values are found to be significant at 5% significance level, which show that the alternate hypothesis can be accepted and the null hypothesis rejected. Thus it is proved that there is strong positive relation for job satisfaction with organisational commitment. Job satisfaction inculcates in employees a positive state of mind (Smith, 1983) which in turn motivates them to repay their organization through organisational commitment (Schnake et al. 2003).

5.14.2 Impact of Job Satisfaction on Organisational Citizenship Behaviour

The hypothesis H₆₁ that higher the job satisfaction, higher will be the organisational citizenship behaviour was checked with regression analysis and the results are displayed in the table given below

Table 5.22. Multivariate Regression Analysis results for Job Satisfaction with Organisational Citizenship Behaviour

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Error df	Mean Square	F	Sig.
Job Security and Compensation	Organizational Citizenship Behaviour Individual	26.353	19	1.762	1.387	3.075	.000*
	Organizational Citizenship Behaviour Organizational	11.703	19	1.698	.616	3.723	.000*
Co-Workers Satisfaction	Organizational Citizenship Behaviour Individual	21.904	13	2.498	1.685	3.442	.000*
	Organizational Citizenship Behaviour Organizational	2.507	13	5.191	.193	.951	.001*
Personal Growth and Satisfaction	Organizational Citizenship Behaviour Individual	33.094	18	1.691	1.839	4.076	.000*
	Organizational Citizenship Behaviour Organizational	10.852	18	2.862	.603	3.644	.000*
Supervisory Satisfaction	Organizational Citizenship Behaviour Individual	27.926	13	4.320	2.148	4.389	.000*
	Organizational Citizenship Behaviour Organizational	9.659	13	4.070	.743	3.666	.000*

(* indicates items significant at 5% significance level)

The above table No.5.22 shows the results obtained from the Multivariate regression analysis done on organisational citizenship behaviour with job satisfaction. All the values are found to be significant at 5% significance level, which states that the null hypothesis can be rejected. Thus it is proved that there is strong positive relation for job satisfaction with organisational citizenship behaviour.

Smith, Organ & Near (1983) have found that satisfaction, ie job satisfaction has a direct effect on citizenship behaviour. Morrison (1994) utilizes an individual's conceptualization of their job as the basis for explaining OCB. He further wrote that employees engage in OCB because these behaviours are viewed as a part of an individual's job. Pond et al. (1997) argue that employees engage in OCB because these behaviours are viewed as being directly rewarded. Instances where wider responsibilities are assigned to an employee, she/he is more likely to engage in OCB (Coyle - Shapiro et al., 2004). Social exchange theory suggests a comprehensive explanation of extra effort. It proposes that workers seek and maintain relationships that promise to offer higher rewards for their contribution. Moreover extra effort and desire to stay coupled with satisfaction lead to citizenship behaviours (Benkhoff, 1997).

5.14.3 Impact of Organisational Commitment on Organisational Citizenship Behaviour

The acceptability of the hypotheses H7 that there is positive relation between organisational commitment and organisational citizenship behaviour was tested using multivariate regression analysis with the sub dimensions of organisational commitment on the values of the sub dimensions of organisational citizenship behaviour and the results are displayed in the table below.

Table 5.23. Multivariate Regression Analysis results for Organisational Commitment with Organisational Citizenship Behaviour

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Error df	Mean Square	F	Sig.
Affective Commitment	Organizational Citizenship Behaviour Individual	26.000	20	1.698	1.300	5.310	.000*
	Organizational Citizenship Behaviour Organizational	9.378	20	2.498	.469	3.468	.000*
Continuance Commitment	Organizational Citizenship Behaviour Individual	27.451	24	5.191	1.144	4.672	.000*
	Organizational Citizenship Behaviour Organizational	10.866	24	1.691	.453	3.348	.000*

(*indicates items significant at 5% significance level)

The above table No.5.23 shows the results obtained from the Multivariate regression analysis done on organisational commitment with organisational citizenship behaviour. All the values are found to be significant at 5% significance level, which states that the null hypothesis can be rejected. Thus it is proved that there is strong positive relation for organisational commitment with organisational citizenship behaviour. As William & Anderson said (1991), an individual's perception of the commitment that exists in their relationship with the organization is positively associated with an employee's willingness to reciprocate by engaging in organisational citizenship behaviour and is also positively related to the broadening of job boundaries to include citizenship type behaviour.

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INTEGRATED MODEL ON IHRP AND HR OUTCOMES

C	6.1	Confirmatory factor analysis
a	6.2	Confirmatory factor analysis on Innovative HR practices
n	6.3	Confirmatory factor analysis on Job Satisfaction
t	6.4	Confirmatory factor analysis on Organisational Commitment
s	6.5	Confirmatory factor analysis on Organisational Citizenship Behavior
	6.6	Harman's test for testing Common Method Bias
	6.7	Evaluation of the model with Structural Equation Modeling
	6.8	Test for Reverse Causality

This chapter tests variants of the proposed model linking Innovative HR practices and HR outcomes. Structural Equation Modeling (SEM) technique is used to compare and identify the best fitting model. Section 6.1 introduces the concept of confirmatory factor analysis of various models. Harman's test for common Method Bias is explained in Section 6.6. Structural Equation Modeling concepts are explained and the integrated models linking Innovative HR practices to each of the HR outcomes namely Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour are presented in section 6.7. Test for Reverse Causality is presented in Section 6.8

6.1 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis which is part of the structural equation modeling techniques can be used to estimate a measurement model that specifies the relationship between observed indicators and their underlying latent constructs. The measurement model specifies how latent constructs are measured by the observed variables and it assesses the construct validity and reliability of the observed variables (Joreskog and Sorbom, 1989). Estimation of the measurement model is used to assess the fit of the data to a hypothesized model. CFA is often used when the number of factors is known beforehand and each variable is allowed to associate with only one factor.

Confirmatory Factor Analysis was done on the final data to confirm the conceptual model developed in the study. The general paradigm suggested by Anderson and Gerbing (1988) was followed in the current research in order to test a model of Innovative HR Practices and various selected HR outcomes. The measurement models of each of the selected HR outcomes were first assessed and then a structural model linking Innovative HR Practices and all the selected HR outcomes were tested. Software package AMOS 4.0 was used to do the Confirmatory Factor Analysis. The following are the commonly used fit indices which help to assess the fit between a model and a data set which in turn proves its validity.

6.1.1 The Goodness-of-Fit Index (GFI)

This is one of the most commonly reported measures of model fit. The GFI is a non-statistical measure that ranges in value from 0 (poor fit) to 1 (perfect fit). The higher the GFI, the better the model fit is considered to be. There is no definite value that indicates “good” model fit (Chin and Todd, 1995), although values above 0.90 are usually considered to be favorable to conclude that there is a good fit between the proposed model and the observed data.

6.1.2 Adjusted Goodness-of-Fit Index (AGFI)

The AGFI is similar to the GFI, but it is adjusted by the ratio of the degrees of freedom for the proposed model to the degrees of freedom for the null. Again, there is no set standard for an acceptable AGFI. In some instances, values of 0.80 or greater are often considered an indication of good fit model (Taylor and Todd, 1995), although values as low as 0.70 have been considered acceptable.

6.1.3 The Comparative Fit Index (CFI)

This is another measure of overall goodness of fit that uses a Chi-square distribution. The CFI produces a value between 0 and 1, with 1 indicating a perfect fit. As a rule of thumb for this statistic, values of 0.90 or above are considered to indicate a good fit. This is one of the most used measures of unidimensionality of the scale.

6.1.4 Bentler-Bonett Fit Index (NFI or TLI)

NFI or TLI is a good indicator of the convergent validity of the questionnaire. The scale with TLI values of 0.90 or above is an indication of strong convergent validity (Bentler and Bonett, 1980).

6.1.5 Root Mean Square Residual (RMSR/RMR)

The closer the RMR value to 0 for a model being tested, the better the model fit. The RMS residuals are the coefficients which result from taking the square root of the mean of the squared residuals, which are the amounts by which the sample variances and covariance differ from the corresponding estimated variances and covariance, estimated on the assumption that the model is correct.

6.1.6 Root Mean Square Error of Approximation (RMSEA)

This is a popular measure of fit which is also called discrepancy per degree of freedom. By convention, there is good model fit if RMSEA is less

than or equal to 0.05. There is adequate fit if RMSEA is less that or equal to 0.08. More recently, Hu and Bentler (1999) have suggested $RMSEA \leq 0.05$ as the cutoff for a good model fit.

6.2 Confirmatory Factor Analysis on Innovative HR Practices (IHRP)

Confirmatory Factor Analysis is done on Innovative HR Practices consisting of three factors i.e. Introduction, Importance and the Extent of Satisfaction of IHRP. The following is the diagram of the same obtained by AMOS and the values are given in the table 6.1 below.

Fig. 6.1. Full measurement model of Innovative HR Practices

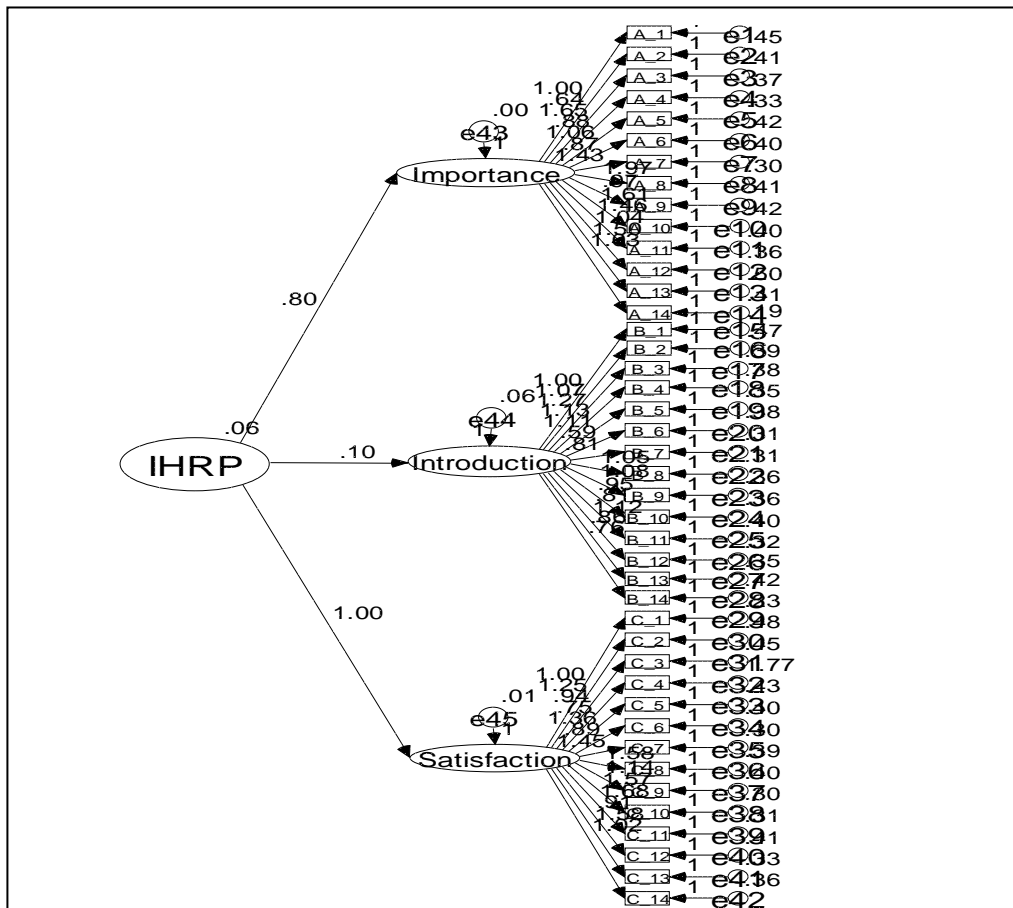


Table 6.1. Confirmatory Factor Analysis for Innovative HR Practices

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.848	0.821	0.846	0.827	0.031	0.039

The values got from the Confirmatory Factor Analysis done on Innovative HR Practices table 6.1 reveals that the model is acceptable as most of the values fall within the acceptable ranges. So all the three factors importance, introduction and satisfaction are found fit in the IHRP model.

6.3 Confirmatory Factor Analysis on Job Satisfaction (JS)

Confirmatory Factor Analysis is done on Job Satisfaction consisting of four factors i.e. Job Security & Compensation, Co-worker Satisfaction, Personal Growth Satisfaction, and Supervisory Satisfaction. The following is the diagram obtained by AMOS 4.0 and the values are given in the table 6.2 below.

Fig. 6.2. Full Measurement model of Job Satisfaction

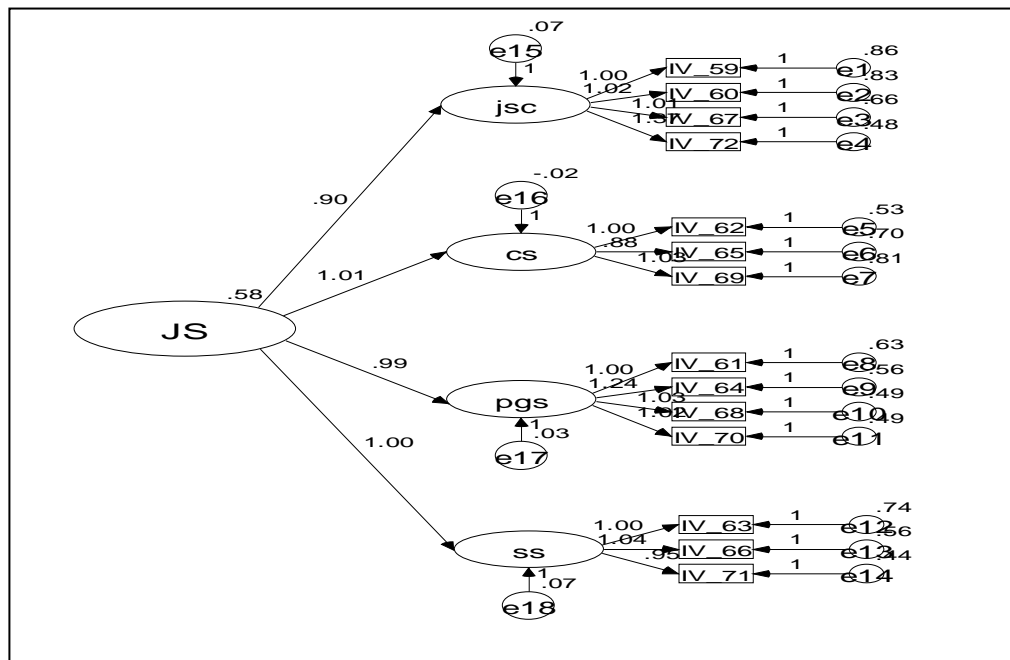


Table 6.2. Confirmatory Factor Analysis for Job Satisfaction

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.923	0.893	0.956	0.947	0.056	0.065

The values got from the Confirmatory Factor Analysis done on Job Satisfaction from table 6.2 reveals that the model is acceptable as the values fall within the acceptable ranges. So all the four Job Security & Compensation, Co-worker Satisfaction, Personal Growth Satisfaction, and Supervisory Satisfaction are found fit in the Job Satisfaction model.

6.4 Confirmatory Factor Analysis on Organizational Commitment (OC)

Confirmatory Factor Analysis is done on Organisational Commitment consisting of two factors i.e. Affective Commitment and Continuance Commitment. The following is the diagram obtained by AMOS 4.0 and the values are given in the table 6.3 below.

Fig. 6.3. Full Measurement model of Organisational Commitment

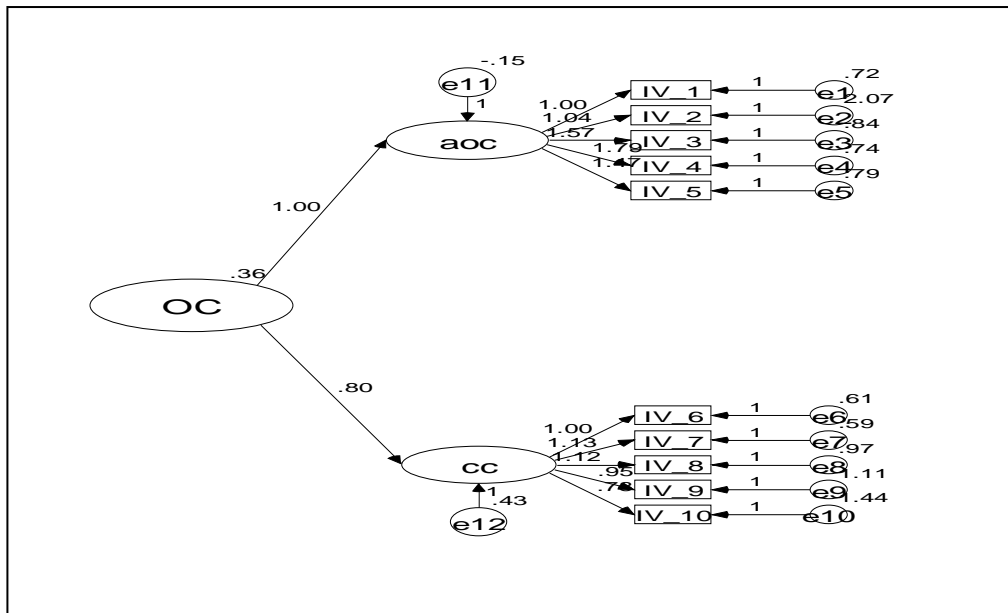


Table 6.3. Confirmatory Factor Analysis on Organisational Commitment

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.943	0.898	0.938	0.910	0.093	0.078

The values got from the Confirmatory Factor Analysis done on Organisational Commitment from table 6.3 reveals that the model is acceptable as the values fall within the acceptable ranges. So all the two factors Affective Commitment and Continuance Commitment are found fit in the OC model.

6.5 Confirmatory Factor Analysis on Organisational Citizenship Behaviour (OCB)

Confirmatory Factor Analysis is done on Organisational Citizenship Behaviour consisting of two factors i.e. Organisational Citizenship Behaviour Individual (OCBI) and Organisational Citizenship Behaviour Organisation (OCBO). The following is the diagram obtained by AMOS 4.0 and the values are given in the table 6.4 below.

Fig. 6.4. Full Measurement Model of Organisational Citizenship Behavior

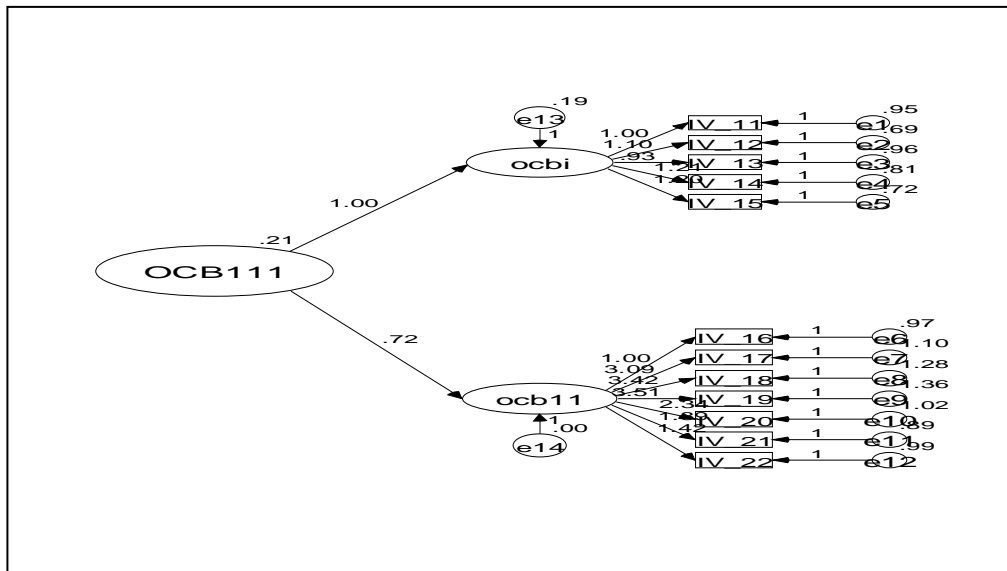


Table 6.4. Confirmatory Factor Analysis on Organisational Citizenship Behaviour

GFI	AGFI	CFI	TLI	RMR	RMSEA
0.938	0.887	0.939	0.906	0.088	0.075

The values got from the Confirmatory Factor Analysis done on Organisational Citizenship Behaviour from table 6.4 reveals that the model is acceptable as the values fall within the acceptable ranges. So all the two factors Organisational Citizenship Behaviour Individual and Organisational Citizenship Behaviour Organisation are found fit in the Organisational Citizenship Behaviour model.

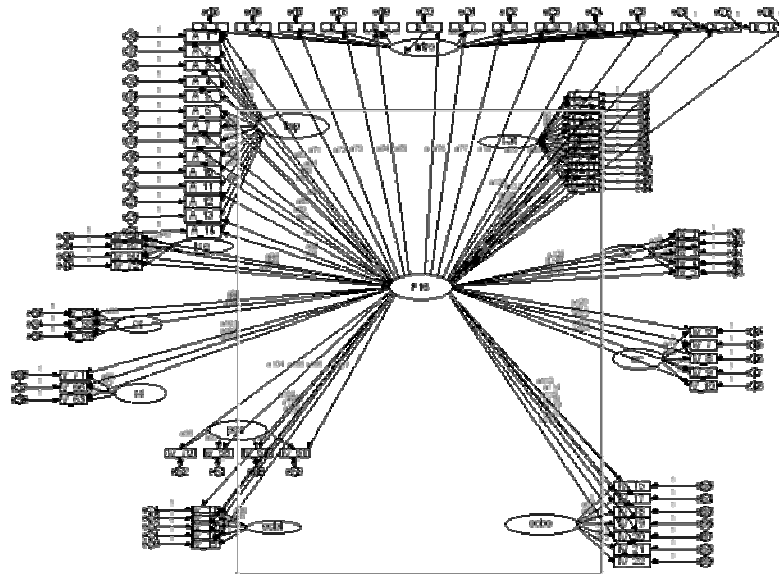
6.6 Harman's test for testing Common Method Bias

Common method variance refers to amount of spurious covariance shared among variables because of the common method used in collecting data. In survey studies in which the same rater responds to the items in a single questionnaire at the same point in time, data are likely to be susceptible to common method variance. Since the data were based on self-reports, their analysis could be limited due to inflation of the relationships between variables.

Harman's single-factor test is the most widely known approach for assessing common method variance in a single-method research design. was conducted to address this concern. Accordingly, all the items from all the constructs in the study were included in a confirmatory factor analysis to determine whether a single-factor claimed a disproportionately large variance. In the confirmatory factor analysis approach, all of the manifested items are modeled as the indicators of a single factor that represents method effects. Method biases are substantial if the hypothesized model fits the data (Malhotra et. al, 2006). The test results are given in the table 6.5. A scrutiny of the results of the test showed

that there was no general factor that accounted for a majority of the variance. As such, it was concluded that common method bias was not present in this study.

Fig. 6.5. Full Measurement Model of Common Method Variance



Legend of the terms used in model

F16:- Common factor for Harman's test for common method variance

IHR: - Innovative HR practices

INTRO: - Introduction of Innovative HR practices

IMPOR:- Importance of Innovative HR practices

SATIS: - Satisfaction of Innovative HR practices

JS: - Job Satisfaction

JSSC: - Job Security and Compensation

JSPGS: - Personal Growth and Satisfaction

JSSS: - Supervisory Satisfaction

JSCS: - Co-Workers Satisfaction

OC: - Organisational Commitment

AFFEC_CO:- Affective Commitment

CONTI_CO:- Continuance Commitment

OCB: - Organisational Citizenship Behaviour

OCBI: - Organisational Citizenship Behaviour Individual

OCBO: - Organisational Citizenship Behaviour Organisational

Table 6.5. Variances of Harman's test for Common Method Variance

Variance	Estimate	S.E.	C.R.	P
SAT	0.043	0.007	6.402	0
IMP	0.019	0.004	4.905	0
AC	0.211	0.033	6.327	0
CC	0.383	0.052	7.292	0
JSC	0.314	0.048	6.598	0
CS	0.26	0.041	6.31	0
SS	0.311	0.048	6.495	0
PGS	0.356	0.048	7.387	0
OCBO	0.263	0.038	6.82	0
OCBI	0.202	0.032	6.318	0
F16	0.027	0.004	6.848	0

6.7 Evaluation of the Model with Structure Equation Modelling (SEM)

The basic model given above is evaluated with SEM by using AMOS 4.0 for finding the overall fitness of the model based on the various fit indices. While running the model in AMOS 4.0, the links with lower critical ratio value were removed from the model and the final model obtained as following.

Fig.6.6. Basic model involving Innovative HR Practices, Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour

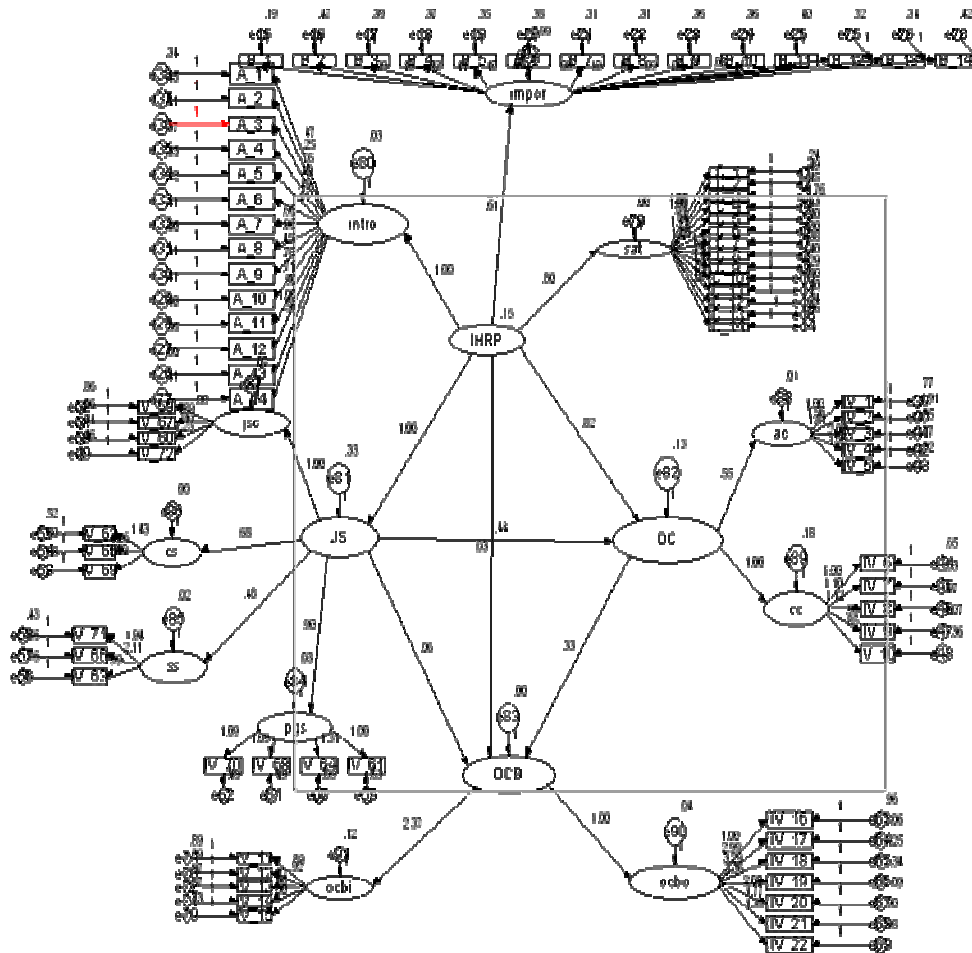
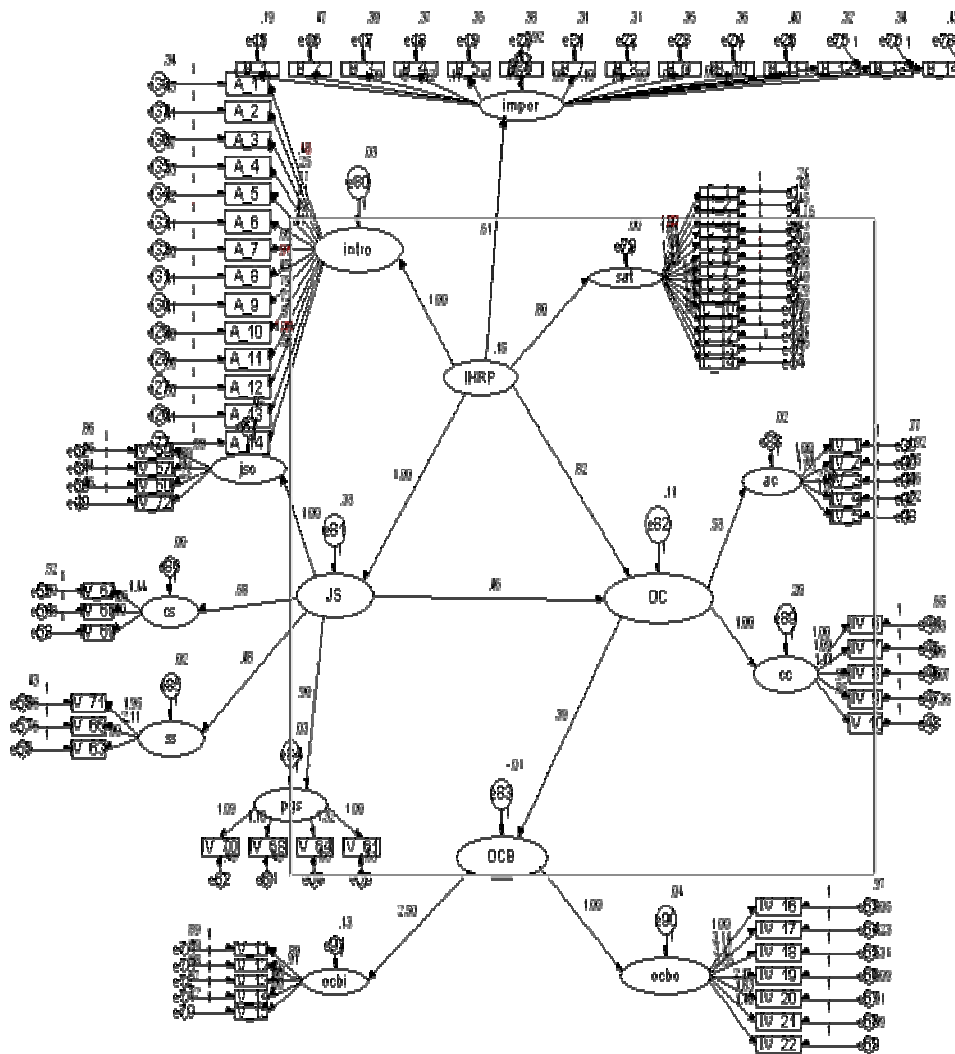


Table 6.6. Fit Values for the Basic Model

Indicators	Values	Fitness
Normed Chi-Square	1.873	Good
GFI	0.631	Not
AGFI	0.610	Not
CFI	0.674	Not
RMSR	0.093	Moderate
RMSEA	0.057	Moderate
PRatio	0.971	Good

As some values are not fit, by checking the modification values of the model, some links are added to the model, by checking the Modification Indices. The values generated after this modification are given in the table below.

Fig. 6.7. Final Model involving Innovative HR Practices, Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour



This final model is evaluated with SEM using AMOS 4.0 and the results are displayed in the table 6.7 shown below.

Table 6.7. Fit Values for the Final Model

Indicators	Values	Fitness
Normed Chi-Square	1.466	Very Good
GFI	0.739	Moderate
AGFI	0.711	Good
CFI	0.834	Good
RMSR	0.057	Good
RMSEA	0.042	Very Good
PRatio	0.925	Very Good

Later some more links have been added to the model from Modification Indices, for getting the final values of the fit indices. Thus the final values got after adding all those links are given in the table 6.8 given below.

Table 6.8. Fit Values for the Final Model after Modification

Indicators	Values	Fitness
Normed Chi-Square	1.664	Very Good
GFI	0.695	Moderate
AGFI	0.674	Moderate
CFI	0.755	Moderate
RMSR	0.072	Good
RMSEA	0.05	Very Good
PRatio	0.96	Very Good

As most of the values given in the table 6.8 above fall within good fit and moderate fit range, the model is acceptable. Thus it can be interpreted that Innovative HR Practices (IHRP) have positive influence on the various HR outcomes i.e. Job Satisfaction (JS), Organisational Commitment (OC) and Organisational Citizenship Behaviour (OCB).

6.7.1 Inter Item Correlation

Inter item correlation is done to find out is there any overlapping of the items observed and they can be bundled to reduce the error in estimation of Structural Equation Modeling fit of the model can be increased. The results of the various variables are shown below in the following tables.

Table 6.9. Inter correlation of the items of the Extent of Importance of IHRP

	employee acquisition strategies	employee retention strategies	compensation & incentives	benefits & service	rewards & recognition practices	technical training	management development	career planning and development practices	performance appraisals	potential development	succession planning	employee relations	employee exit & separation	adopting responsibility
employee acquisition strategies	1	.160**	.085	.054	.220**	.197*	.162**	.224**	.265**	.136*	.145	.114*	.007	.116*
employee retention strategies	.160**	1	.137*	.096	.339**	.201*	.009	.062	.236**	.063	.094	.022	-.068	.023
compensation & incentives	.085	.137*	1	.163**	.127*	.053	.151**	.160**	.128*	.223**	.124	.238**	.193*	.073
benefits & service	.054	.096	.163**	1	.076	.261*	.046	.143*	.053	.125*	.092	.215**	.074	.066
rewards & recognition practices	.220**	.339**	.127*	.076	1	.176*	.093	.149**	.215**	.081	.192	.031	.131*	.174**
technical training	.197**	.201**	.053	.261**	.176**	1	.100	.229**	.126*	.087	.119	.144*	-.023	.172**
management development	.162**	.009	.151**	.046	.093	.100	1	.327**	.071	.290**	.206	.103	.211**	.071
career planning and development practices	.224**	.062	.160**	.143*	.149**	.229*	.327**	1	.132*	.365**	.273	.272**	.205**	.222**
performance appraisals	.265**	.236**	.128*	.053	.215**	.126*	.071	.132*	1	.071	.032	.075	.103	.084
potential development	.136*	.063	.223**	.125*	.081	.087	.290**	.365**	.071	1	.140	.223**	.295**	.164**
succession planning	.145*	.094	.124*	.092	.119*	.119*	.206**	.273**	.032	.140*	1	.048	.148*	.119*
employee relations	.114*	.022	.238**	.215**	.031	.144*	.103	.272**	.075	.223**	.048	1	.037	.161**
employee exit & separation	.007	-.068	.193*	.074	.131*	-.023	.211**	.205**	.103	.295**	.148*	.037	1	.003
adopting responsibility	.116*	.023	.073	.066	.174**	.172*	.071	.222**	.084	.164**	.119	.161**	.003	1

Table 6.10. Inter correlation of the items of the Extent of Introduction of IHRP

	employee acquisition strategies	employee retention strategies	compensation & incentives	benefits & service	rewards & recognition practices	technical training	management development	career planning and development practices	performance appraisals	potential development	succession planning	employee relations	employee exit & separation	adopting responsibility
employee acquisition strategies	1	.208**	.274**	.211**	.472**	.264**	.203**	.188**	.234**	.186**	.244**	.195**	.237**	.107
employee retention strategies		1	.119*	.120*	.151**	.141*	.195**	.311**	.247**	.296**	.151**	.261**	.194**	.250**
compensation & incentives			1	.198**	.167**	-.006	.201**	.212**	.321**	.105	.194**	.193**	.172**	.104
benefits & service				1	.169**	.200**	.100	.286**	.089	.127	.133	.226**	.185**	.215**
rewards & recognition practices					1	.101	.322**	.079	.340**	.213**	.139*	.175**	.189**	.182**
technical training						1	.097	.133*	.092	.204**	.070	.311**	.034	.099
management development							1	.221**	.205**	.127	.148**	.317**	.189**	.242**
career planning and development practices								1	.256**	.228**	.139*	.220**	.263**	.193**
performance appraisals									1	.167**	.115*	.196**	.250**	.198**
potential development										1	.135*	.246**	.211**	.255**
succession planning											1	.089	.284**	.155**
employee relations												1	.142**	.182**
employee exit & separation													1	.416**
adopting responsibility														1

Table 6.11. Inter correlation of the items of the Extent of Satisfaction of IHRP

employee acquisition strategies	1	.299**	.156**	.399**	.265**	.369**	.275**	.314**	.363**	.327**	.195**	.281**	.187**
employee retention strategies	.299**	1	.172**	.151**	.278**	.300**	.269**	.238**	.336**	.223**	.215**	.153**	.128**
compensation & incentives	.259**	.172**	1	.180**	.110	.259**	.214**	.284**	.268**	.247**	.195**	.206**	.154**
benefits & service	.156**	.064	.246**	1	.126	.149**	.293**	.248**	.227**	.167**	.167**	.081	.239**
rewards & recognition practices	.399**	.151**	.180**	.166**	1	.372**	.282**	.291**	.358**	.356**	.254**	.203**	.135**
technical training	.265**	.278**	.110	.126	.284**	1	.378**	.224**	.247**	.266**	.267**	.048	.259**
management development	.369**	.300**	.259**	.149**	.372**	.330**	1	.356**	.439**	.475**	.297**	.358**	.269**
career planning and development practices	.275**	.269**	.214**	.293**	.282**	.378**	.433**	1	.392**	.349**	.336**	.300**	.286**
performance appraisals	.314**	.238**	.284**	.248**	.291**	.224**	.356**	.324**	1	.347**	.254**	.310**	.233**
potential development	.363**	.336**	.268**	.227**	.358**	.247**	.439**	.392**	.299**	1	.352**	.310**	.297**
succession planning	.327**	.223**	.247**	.167**	.356**	.266**	.475**	.349**	.419**	.419**	1	.378**	.196**
employee relations	.195**	.215**	.195**	.167**	.254**	.267**	.297**	.336**	.352**	.210**	1	.251**	.198**
employee exit & separation	.281**	.153**	.206**	.081	.203**	.048	.358**	.300**	.310**	.378**	.251**	1	.239**
adopting responsibility	.187**	.128**	.154**	.239**	.135**	.259**	.269**	.286**	.297**	.196**	.198**	.239**	1

Table 6.12. Inter correlation of the items of the Continuance Commitment dimension of Organisational commitment

	Continuance commitment 1	Continuance commitment 2	Continuance commitment 3	Continuance commitment 4	Continuance commitment 5
Continuance commitment 1	1	.574**	.517**	.366**	.263**
Continuance commitment 2	.574**	1	.530**	.394**	.324**
Continuance commitment 3	.517**	.530**	1	.404**	.395**
Continuance commitment 4	.366**	.394**	.404**	1	.433**
Continuance commitment 5	.263**	.324**	.395**	.433**	1

Table 6.13. Inter correlation of the items of the Affective Commitment dimension of Organisational commitment

	Affective commitment 1	Affective commitment 2	Affective commitment 3	Affective commitment 4	Affective commitment 5
Affective commitment 1	1	.080	.459**	.342**	.384**
Affective commitment 2	.080	1	.184**	.207**	.216**
Affective commitment 3	.459**	.184**	1	.479**	.402**
Affective commitment 4	.342**	.207**	.479**	1	.448**
Affective commitment 5	.384**	.216**	.402**	.448**	1

Table 6.14. Inter correlation of the items of the organisational citizenship behavior (individual) dimension of Organisational Citizenship Behaviour

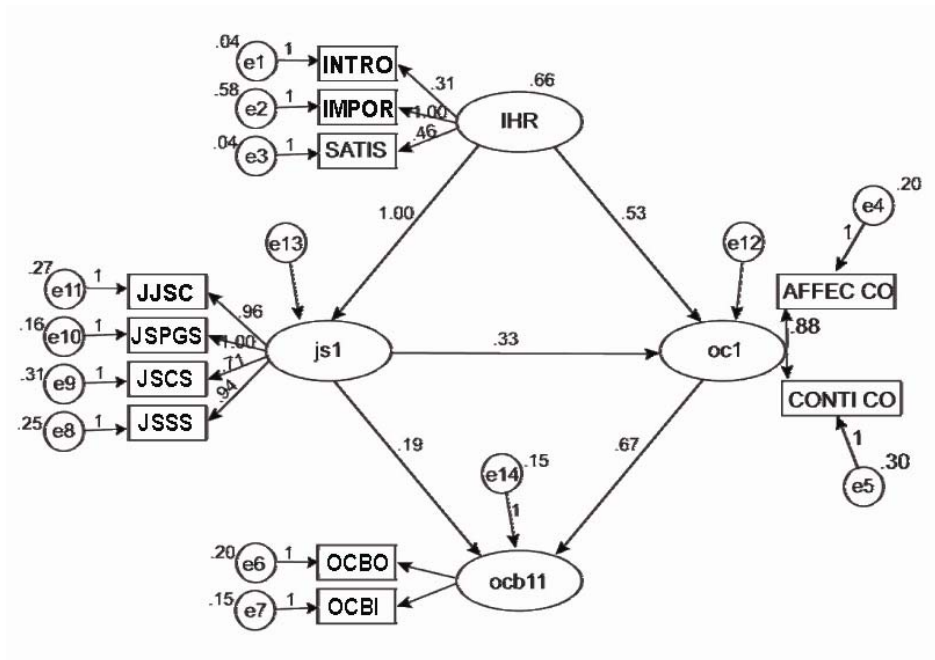
	OCB individual 1	OCB individual 2	OCB individual 3	OCB individual 4	OCB individual 5
OCB individual 1	1	.410**	.332**	.342**	.336**
OCB individual 2	.410**	1	.487**	.431**	.388**
OCB individual 3	.332**	.487**	1	.473**	.462**
OCB individual 4	.342**	.431**	.473**	1	.488**
OCB individual 5	.336**	.388**	.462**	.488**	1

Table 6.15. Inter correlation of the items of the organisational citizenship behavior (organization) dimension of Organisational Citizenship Behaviour

	OCB Organisational 1	OCB Organisational 2	OCB Organisational 3	OCB Organisational 4	OCB Organisational 5	OCB Organisational 6	OCB Organisational 7
OCB Organisational 1	1	-.212**	-.075	.091	.334**	.439**	.414**
OCB Organisational 2	-.212**	1	.542**	-.451**	-.388**	-.268**	-.235**
OCB Organisational 3	-.075	.542**	1	-.594**	-.338**	-.315**	-.159**
OCB Organisational 4	.091	-.451**	-.594**	1	.405**	.286**	.200**
OCB Organisational 5	.334**	-.388**	-.338**	.405**	1	.432**	.402**
OCB Organisational 6	.439**	-.268**	-.315**	.286**	.432**	1	.481**
OCB Organisational 7	.414**	-.235**	-.159**	.200**	.402**	.481**	1

So the Correlation of all the items shows a moderate and high correlation between the items so we can bundle these items could be bundled and average values of the sub variables can be taken in the Structural Equation Modelling . In theory it is said that there is a bundling effect on the variables of Innovative HR Practices, Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour.

Fig 6.8. Basic Model after Bundling of the items in the sub variables



Legend of the terms used in model

- IHR: - Innovative HR practices
- INTRO: - Introduction of Innovative HR practices
- IMPOR: - Importance of Innovative HR practices
- SATIS: - Satisfaction of Innovative HR practices

JS: - Job Satisfaction

JSSC: - Job Security and Compensation

JSPGS:- Personal growth and satisfaction

JSSS:- Supervisory Satisfaction

JSCS:- Co-Workers Satisfaction

OC: - Organisational Commitment

AFFEC_CO:- Affective commitment

CONTI_CO:- Continuance commitment

OCB: - Organisational Citizenship Behaviour

OCBI: - Organisational Citizenship Behaviour Individual

OCBO: - Organisational Citizenship Behaviour Organisational

Table 6.16. The regression weights of the model

Regression Weights			Estimate	S.E.	C.R.	P
js	<--	IHR	1			
oc	<--	js	0.331	0.085	3.916	0
oc	<--	IHR	0.527	0.103	5.109	0
ocb	<--	js	0.194	0.08	2.422	0.015
ocb	<--	oc	0.667	0.101	6.612	0
INTRO	<--	IHR	0.313	0.023	13.865	0
IMPOR	<--	IHR	1			
SATIS	<--	IHR	0.464	0.031	15.062	0
AFFEC_CO	<--	oc	0.883	0.051	17.162	0
CONTI_CO	<--	oc	1			
OCBOR	<--	ocb	0.413	0.039	10.529	0
OCBIN	<--	ocb	1			
JSSS	<--	js	0.943	0.039	24.042	0
JSCS	<--	js	0.709	0.038	18.494	0
JSPGS	<--	js	1			
JSSC	<--	js	0.962	0.04	23.969	0

The above table 6.16 shows that the regression effect of all the variables are significant but the values of job satisfaction to organisational citizenship behaviour is the least at 0.19 but the values are significant.

Table 6.17. Fit Values for the Final Model after bundling of the items

Fit Measure	Default Model	Fit
Degrees of freedom	39	
P	0	
Discrepancy / df	2.513	Very Good
RMR	0.016	Very Good
GFI	0.944	Very Good
Adjusted GFI	0.905	Very Good
Normed fit index	0.959	Very Good
Relative fit index	0.942	Very Good
Incremental fit index	0.975	Very Good
Tucker-Lewis index	0.964	Very Good
Comparative fit index	0.975	Very Good
Parsimony ratio	0.709	Very Good
RMSEA	0.07	Good
Hoelter .05 index	173	Very Good
Hoelter .01 index	197	Very Good

To assess the global fit of the models researcher retained several fit indices to compensate for the weakness of each measure (Roussel et.al.2002).The chi square is the basic index used for the evaluation the model but this is very sensitive to the sample size. Regarding absolute indices we retained the GFI, AGFI values. And also three incremental values like NFI,CFI and NNFI.

In the table 6.17 above the results of various model fit shows that the model is good fit of the average model when compared to the earlier model the only fit indices not coming good is RMSEA value but the theory says that the RMSEA value is based on the sample size and degree of freedom. In this study the degree of freedom is small so the RMSEA value is not the safest criteria to decide on the model fit.

6.8 Test for Reverse Causality

Notionally, statistical analysis using SEM procedures implicitly assumes causality drawn from theoretical premises. In keeping with this line of reasoning and drawing upon relevant organisational literature, the direction of association between the constructs in the study has been framed which gave rise to the proposed model. However, to statistically support a conceptual conjecture a proposed model has to be compared to its alternate model wherein the direction of causality is reversed (Biswas, 2010). The reversed model of the study is redrawn as in fig 6.9. The variables identified as exogenous (independent) and endogenous (dependent) in the proposed model were marked as endogenous (dependent) exogenous (independent) respectively in the alternate model. The results are displayed in table 6.18. The comparison showed a discrepancy in the fit indices between the two models in favour of the proposed model vis-à-vis the alternate model as shown in table 6.19..

Fig. 6.9. Model after reversing the endogenous and exogenous variables

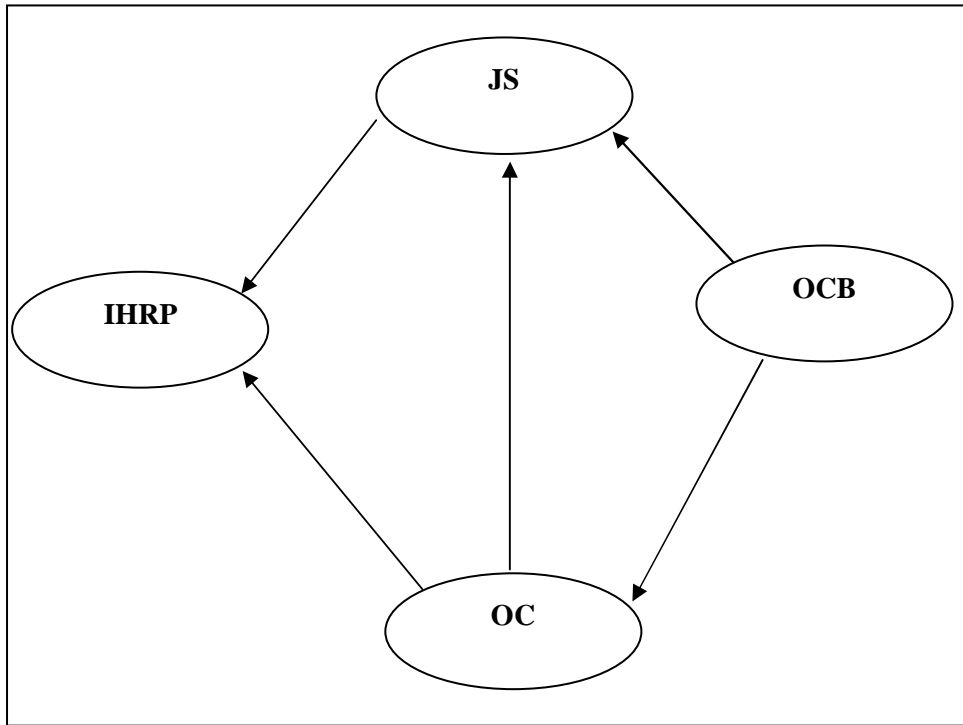


Table 6.18 Regression Weights of the Reversed Model

Regression Weights		Estimate	S.E.	C.R.	P
JS	<-- OCB	0.666	0.284	2.347	0.19
OC	<-- OCB	1.314	0.293	4.492	0.058
IHRP	<-- JS	1			
IHRP	<-- OC	0.46	15.182	0.03	0.976
IHRP	<-- OCB	0.146	20.102	0.007	0.994

The result shows that there is no significant relationship between any variables in the reversed model which shows that there is no reverse causal effect or spuriousness in the relationship evinced in the SEM analysis. The result was further validated by the fit measures of the model which are in table 6.19 below.

Table 6.19. Fit Values for the Reverse Model after interchanging endogenous and exogenous variables.

Fit Measure	Default model	Fit
RMR	0.08	Moderate
GFI	0.643	Poor
Adjusted GFI	0.622	Poor
Parsimony-adjusted GFI	0.608	Poor
Normed fit index	0.482	Poor
Relative fit index	0.466	Poor
Incremental fit index	0.634	Poor
Tucker-Lewis index	0.619	Poor
Comparative fit index	0.631	Poor
Parsimony ratio	0.969	Poor
RMSEA	0.061	Moderate
P for test of close fit	0	
Hoelter .05 index	150	Very Good
Hoelter .01 index	153	Very Good

To sum up, Structural Equation Modeling (SEM) shows that job satisfaction and organizational commitment are acting as the intervening variables unlike visualized in the initial conceptual framework adopted for the study. The direct relationship between Innovative HR Practices (IHRP) and Organisational Citizenship Behaviour (OCB) imagined earlier in the default model was found to be insignificant in the hybrid model. But IHRP-OCB linkage assumes meaning and significance when organisational commitment and job satisfaction are interposed. The SEM analysis thus established the intervening effects of organisational commitment and job satisfaction in the overall explanation.

SEM analysis, this statistical findings and the explanatory relationships established among the variables considered in this section adequately offers to establish the model linking Innovative HR Practices and HR Outcomes as desired under the last specific objective of the study.

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DISCUSSIONS, FINDINGS AND CONCLUSIONS

Contents	7.1	Discussions
	7.2	Findings
	7.3	Conclusions
	7.4	Implications to Management Theory
	7.5	Implications for Managerial Practice
	7.6	Scope for Further Research

Discussions are presented in Section 7.1 The research findings are summarized in Section 7.2 and Section 7.3 contains the conclusions drawn from the study. Section 7.4 and 7.5 contains implications of the study to management theory and for managerial practice. Scope for further research is included in section 7.6.

7.1 Discussions

The demographics of the respondents show that there is a comparatively large representation of males than females and also that technical graduates make up the major portion of the human resources in software companies. The majority of the software professionals is below thirty years of age and has had tenure of only less than two years in the software firms. Most of them have total professional experience of less than four years.

7.1.1 Effect of Background variables on perception of IHRP

It is evident from the data that employees in software companies do perceive the importance and introduction and report satisfaction of Innovative HR Practices almost similarly not withstanding their difference in gender. Perception regarding the importance of innovative HR Practices does not differ with age variations of the employees. Variation in the remaining two factors i.e. perception on introduction and satisfaction of IHRP across age categories is found to be significant. Therefore even though age of employees does not affect their perception on the importance of IHRP, it affects their perception on the introduction and extent of satisfaction of IHRP.

From the analysis it is clear that the perception of importance of IHRP had no significant difference with respect to educational qualification among the employees in the companies. But the other two factors i.e. introduction and extent of satisfaction showed significant values and it resulted in significant difference with respect to the employee's educational qualifications.

Analysis reveals that the Tenure of employees in their organization does not account for the importance they attribute for the IHRPs but affects their

awareness of the extent of introduction and satisfaction of IHRPs with significant statistical variation.

The analysis also shows that the perceived importance of IHRP showed a value which is not significant; it revealed that there is no difference in the perceived importance of IHRP with respect to experience of the employees. But the other factors i.e. Introduction and extent of satisfaction show significant values and reflects significant differences with respect to the employee's experience in the organisation.

The current findings are supported by the findings of earlier studies. Divergent perspectives and self-serving perceptions by multiple constituencies in human resources area, have already been found by Tsui (1987) and Tsui & Milkovich (1987) in that employee preferences and expectations differed among various constituencies. Johns (1993) found a clear self-serving pattern with divergent perspectives between employees and managers. Multivariate effects of demographic variables such as age, gender, race, education, hierarchy, and job tenure have also been examined and found to exist (Kossek, 1989; Tsui & O'Reilly, 1989).

To sum up the discussion so far it may be summarized that the cross tabulation of gender, age, education, experience and tenure on the perception of the various dimensions of IHRP shows that the employees in software companies perceive the importance, introduction and extent of satisfaction of innovative HR practices equally, irrespective of their sex differences. While age, educational qualification, experience and tenure of employees did not affect their perception on the importance of IHRP, these factors affected their perception in terms of the extent of introduction and satisfaction of IHRP.

7.1.2 HR Outcome variables of the study

Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour were the selected HR outcome variables of the study. The t test results establish attestable differences of the two groups of high and low perception on IHRP on all the sub dimensions of job satisfaction. The current findings are strongly supported by earlier studies which suggest that employee perceptions of benefits from the innovative HR practices affect attitudes towards all the dimensions of job satisfaction. It needs to be mentioned that innovations which are linked to the needs of the employees and the organization are more likely to become accepted and utilized (Kossek, 1989, 1990).

The t-test results for the difference of mean scores on the organisational commitment by groupings based on high and low values on the perception on IHRP establish significant differences between the two groups on the two sub dimensions of organisational commitment namely, affective commitment and continuance commitment. Similar notions were offered by Zomitsky (1995) when he described that HR practices contributed to the economic success of an organization through enhanced employee commitment and satisfaction.

The t test results show significant differences between the two groups with high and low scores on the perception on IHRP the two sub dimensions of organisational citizenship behavior- Innovative HR practices influence the minds of the employees which produce higher level of job satisfaction and motivates the employees to be committed towards the organisation (Smith, 1983; Schnake et.al., 2003). Likewise the, Innovative HR practices influence the Organisational Citizenship Behaviour because higher levels

of the IHRPs tend to enhance the supportive environment in of the organisation which in turn enhances the Organisational Citizenship Behaviour among employees.

It is very evident from the discussion so far that there are significant differences between the two groups with high and low scores on the perception on IHRP with all the four subdimensions of job satisfaction namely supervisor satisfaction, coworker satisfaction, personal growth and satisfaction and job security and compensation, , the two sub dimensions of organisational commitment ie. affective and normative commitment and the two sub dimensions of organisational citizenship behavior-OCB (individual) and OCB (organizational).

7.1.3 Perception on IHRP & HR Outcomes

Present analyses conveyed that the perceived importance of innovative HR practices has no effect on job satisfaction of the employees. But perceived extents of introduction and satisfaction levels of IHRP contribute towards the creation of job satisfaction. Generally spoken, Innovative HR practices have positive effect on the creation of job satisfaction among the employees except for the sub dimension of perceived importance of IHRP. The hypothesised relation between the sub dimensions of the independent variable and the dependent variable is supported except in one sub dimension i.e. importance of IHRP. Extent of introduction and satisfaction of innovative HR Practices have strong positive relation on the job satisfaction of the employees.

To quote similar other observations, Mohr (1969) contends that willingness to innovate is not enough; individuals must be impelled to innovate and resources for innovation need to be available. This suggests that even if resources are

available, there must be congruence between the innovation and the individual's attitude toward it. In a more recent study, Sillince & Harindranath (2001) found some empirical support for the argument that garnering acceptance for radically new working practices requires congruence between the innovation and the employee's attitude toward the innovation. Acceptance of human resources management innovations may also be affected by perceptions about the benefits of the innovation to the employees themselves as well as to the organization. Some researchers maintain that innovative practices that are congruent with employee needs and values will aid the acceptance of the human resource management innovation implemented (Dowling & Schuler, 1989; Gilbert, 1994; Rousseau, & Wade-Benzoni, 1994; Van Buren & Leana, 2000).

Regression results that only extend of introduction and satisfaction levels on IHRP affect the creation of job satisfaction among the employees and not the perception on the importance of IHRP. Further detailed multivariate regression analysis of each of the dimension of IHRP with the sub dimensions of the job satisfaction variables clarified that the perceived importance of IHRP affects only one sub dimension of job satisfaction namely personal growth and satisfaction, leaving three remaining sub dimensions, ie. supervisor satisfaction, coworker satisfaction and job security and compensation, unaffected.

Earlier studies have also revealed that a significant relationship exists between IHRP and job satisfaction (Organ & Lingl, 1995). The literature additionally underlines the fact that there is strong positive relation for IHRP with employees' job satisfaction in software companies. It says that Job satisfaction is one of the most prominent correlates of HR Practices (Bateman & Organ, 1983, Pfeffer, 1987, Organ & Konovsky, 1989). An HR practice

inculcates in employees a positive state of mind (Smith, 1983) which in turn motivates them to repay their organization (Schnake et. al., 2003). Only positive beneficial actions directed at employees by the organization create an impetus for employees to reciprocate in positive ways through their attitudes and/or behaviors (Coyle et al. 2004) which result in the increased job satisfaction level. Thus the finding of the present study is supported very well by the findings of earlier researches and existing literature.

Analysis of the study shows that the perceived importance of innovative HR practices has no effect on organisational commitment of the employees. But regression analysis revealed that the perceived extent of introduction and satisfaction levels of IHRP contribute towards creation of organisational commitment. Thus innovative HR practices have positive effect on the creation of organisational commitment among the employees except for the sub dimension of perceived importance of IHRP.

There is positive relation between the sub dimensions of the independent variable IHRP and the dependent variable organizational commitment except in the case of one sub dimension i.e. importance of IHRP. Extent of introduction and satisfaction of innovative HR Practices have positive relations with organisational commitment of the employees.

The sub dimensions of the innovative HR practices (Importance, Introduction, and satisfaction of IHRP) have attestable influence on the sub dimensions of the organisational commitment (affective commitment and continuance commitment) because the significance values (P-values) are below 0.05. The hypothesis that higher the perceived introduction, extent of importance and extent of satisfaction of the innovative HR practices higher affective and continuance Organisational Commitment among the employees is supported.

Meyer and Allen (1990) found that employees with a strong personal attachment and identification with the company continue in the employment. This is 'affective commitment' that arises from the obligation due to social pressures constitute continuance commitment and both give rise to Organisational Commitment which is strongly related to Innovative HR Practices. Studies show that employees' commitment to the organization is a function of their perception of the people orientedness of the organisation. The perception that the organisation was action-oriented with respect to the extent of introduction of HR innovations is likely to enhance employee beliefs about the commitment of the management of their organisation to the human resources of the organisation. This, in turn, is likely to lead to higher identification with the values of their organisation. By promoting new HR practices, an organisation provides the signal that its human resources are worthy of the firm's investment, attention and time (Gilley, 2001).

Hiltrop (1994) suggests measures to evaluate the effectiveness of HR practices and that one way could be via the positive impact of HR on commitment. Zomitsky (1995) stated that HR practices contributed to the economic success of an organisation through enhanced employee commitment and satisfaction. Benkhoff (1997) conducted a study to explore the proposed link between HRM characteristics and their relationships to employee satisfaction, intention to stay and organisational performance. Organisational commitment emerged as the central variable that was closely related to work satisfaction and intention to stay and, most important, made a significant contribution to performance of the firm. Thus the finding of the present study is also supported very well by the findings of earlier research and existing literature.

As in the case of earlier instances, the findings of the present study reveals that the perceived importance of innovative HR practices has no effect on

organisational citizenship behaviour of the employees. Regression analysis reveals that the perceived extent of introduction and satisfaction levels of IHRP do contribute towards creation of organisational citizenship behaviour. Thus, as per the current study, innovative HR practices have a positive effect on the creation of organisational citizenship behaviour among the employees except for the sub dimension of perceived introduction of IHRP.

The initial hypothesis that there is positive relation between the sub dimensions of the independent variable and the dependent variable has been proved except in one sub dimension i.e. importance of IHRP. Extent of introduction and satisfaction of innovative HR Practices have a strong positive relation on organisational citizenship behaviour of the employees.

The three sub dimensions which constitute IHRP are checked with the two sub dimensions of OCB i.e. OCB Individual and OCB Organisational and the analysis shows that all the dimensions of the Innovative HR practices (importance, introduction, and satisfaction of IHRP) account for significant differences on the dimension of the organisational citizenship behaviour namely OCB (individual) and OCB (organisational). The hypothesis that importance, introduction and extend of satisfaction of the innovative HR practices are positively related to employees organisational citizenship behaviour is accepted.

Podsakoff et al. (2000) show that levels of citizenship performance tend to be enhanced in organizations that set group goals, demonstrate a high degree of justice, design jobs to be intrinsically satisfying and have leaders who provide a supportive environment and who themselves exhibit a citizenship behaviour. According to Moorman (1991), OCB consists of a great variety of behaviors, only some of which may be performed within

the view of the supervisor. Therefore it becomes even more difficult for supervisors to exactly know what enhances citizenship behaviour among their subordinates. This result linking IHRP and OCB will therefore be of great use to them. Several researchers have begun to recognize that individuals may engage in OCB for different reasons or motives because they want to promote the welfare of others, or the organization, or that they may do so as a form of political influence in an effort to help them. This study underlines the involvement of innovative HR practices for enhancing the organisational citizenship behaviour that will be very much helpful for every organisation.

Multivariate regression analysis results of job satisfaction on organisational commitment show that there is strong positive relation between job satisfaction and organisational commitment. Job satisfaction inculcates in employees a positive state of mind (Smith, 1983) which in turn motivates them to repay their organization through organisational commitment (Schnake et al. 2003).

Multivariate regression analysis done for organisational citizenship behaviour with job satisfaction as explanatory variable shows that there is strong positive contribution from job satisfaction into organisational citizenship behaviour. To quote other studies Smith, Organ & Near (1983) have found that job satisfaction has a direct effect on citizenship behaviour. Morrison (1994) utilizes an individual's conceptualization of their job as the basis for explaining OCB. He further wrote that employees engage in OCB because these behaviours are viewed as a part of an individual's job. Pond et al. (1997) argue that employees engage in OCB because these behaviours are viewed as being directly rewarded. Instances where wider responsibilities are assigned to an employee, she/he is more likely to

engage in OCB (Coyle - Shapiro et al., 2004). Social exchange theory, as a comprehensive explanation of extra effort, proposes that workers seek and maintain relationships that promise to offer higher rewards for their contribution. Moreover extra effort and desire to stay coupled with satisfaction lead to citizenship behaviours (Benkhoff, 1997).

It is evident from the results of multivariate regression analysis done on organisational commitment with organisational citizenship behaviour that there is strong positive relation for organisational commitment with organisational citizenship behaviour. As William & Anderson said (1991), an individual's perception of the commitment that exists in their relationship with the organization is positively associated with an employee's willingness to reciprocate by engaging in organisational citizenship behaviour and is also positively related to the broadening of job boundaries to include citizenship type behaviour.

Structural Equation Modeling (SEM) procedures justify the model linking innovative HR practices and the HR Outcomes. It shows that job satisfaction and organizational commitment are acting as the intervening variables unlike visualized in the initial conceptual framework adopted for the study. The direct relationship between Innovative HR Practices (IHRP) and Organisational Citizenship Behaviour (OCB) imagined earlier in the default model was found to be insignificant in the hybrid model. But IHRP-OCB linkage assumes meaning and significance when organisational commitment and job satisfaction are interposed. The SEM analysis thus established the intervening effects of organisational commitment and job satisfaction in the overall explanation.

From a practical point of view it is important for managers to be aware of employee's perceptions about IHRPs. It is therefore imperative that HR managers design their IHRPs in such a manner that employee's are satisfied with their new initiatives. They also should ensure that these initiatives are implemented in such a manner that it invokes favourable attitude among the employees. IHRP proving to be a significantly positive predictor of attitudinal factors like job satisfaction, commitment and citizenship behaviour. The results underscore that support and sincerity in supervisor-subordinate and peer-related relationships enhance an individual's level of satisfaction, commitment and citizenship behaviour. IHRPs should enhance the cohesion among organizational members which is an important underlying factor in increasing an employee's job satisfaction, commitment and citizenship behaviour.

IHRPs need to be for the benefit of the employees and not for HR department and managers. In the process of introducing and implementing IHRPs the employees would be able to develop sense and meaning in their work and work environment. Job satisfaction is the extent of individual's identification with his/ her job, where as organizational commitment is the extent of an employee's psychological identification with the organization. The affirmative strength with which the employee perceives the various facets of job environment and his/ her job would build up both discretionary as well as non-discretionary role perceptions. Organisational citizenship behavior directed towards organization which is non discretionary component of work of an employee would get enhanced substantially in the advent of introducing and implementing IHRPs which are beneficial to the employees.

The primary purpose of this study was to evaluate the contributions of Innovative HR practices in bringing favourable HR outcomes namely-Job Satisfaction, Organisational Commitment and Organisational Citizenship Behaviour among software professionals in software firms. The following are significant findings from the research done.

7.2 Findings

- The analyses of the background variables showed that a comparatively large representation of male employees work in software firms than female employees and also that technical graduate made the major portion of the human resource in software companies. It also revealed that the majority of the software professionals belonged to below thirty years of age category and had tenure of only less than two years in these software firms. Most of them had total professional experience of less than four years.
- Software professionals perceived that their firms gave importance to the innovative HR practices for achieving the organisational objectives when compared to the extent of introduction of the innovative HR practices for achieving the organisational objectives and extent of satisfaction of the innovative HR practices.
- Employees in software companies perceived the Importance, extent of introduction and satisfaction of innovative HR Practices similarly not withstanding their difference in gender.
- Age of employees did not affect their perception on the importance of IHRP but affected their perception in terms of extent of introduction and extent of satisfaction of IHRP with respect to age group.

- It is found that the perception of importance of innovative HR practices had no difference with respect to educational qualification of the employees, while extent of introduction and satisfaction showed significant difference with respect to the employee's educational qualifications.
- Perceived extent of introduction of the innovative HR practices and extent of satisfaction showed significant difference with respect to the employee's tenure with the organisation but the perceived importance did not show any significant difference with respect to tenure.
- It also showed that the perceived Importance had no difference with respect to experience, while perceived extend of introduction and satisfaction showed significant difference with respect to the employee's experience.
- Perceived importance of innovative HR Practices had insignificant effect on job satisfaction, meanwhile Introduction and the extent of satisfaction of innovative HR practices had a significant relation on job satisfaction.
- Perceived importance of the innovative HR practices had significant influence only on the personal growth satisfaction sub dimension of job satisfaction, but introduction and extend of satisfaction of innovative HR practices had significant influence on all four sub dimensions of job satisfaction i.e. supervisor satisfaction, co worker satisfaction, personal growth satisfaction and job security and compensation.

- The perceived importance, extent of introduction and the extent of satisfaction of the innovative HR practices were positively related to employees' organisational commitment.
- The perceived importance, extent of introduction and the extent of satisfaction of the innovative HR practices were positively related to both the sub dimensions of employees' organisational commitment i.e. affective commitment and continuance commitment.
- The perceived importance, extent of introduction and the extent of satisfaction of the innovative HR practices were significantly related to employees' organisational citizenship behaviour.
- The perceived importance, extent of introduction and the extent of satisfaction of the innovative HR practices were significantly related to both the sub dimensions of the employee's organisational citizenship behaviour i.e. organisational citizenship behaviour (individual) and organisational citizenship behaviour (organisational).
- There was strong positive relation for job satisfaction with organisational commitment. All the four sub dimensions of job satisfaction i.e. supervisor satisfaction, co worker satisfaction, personal growth satisfaction and job security and compensation had significant influence on both the sub dimensions of employees organisational commitment i.e. affective commitment and continuance commitment.
- There was strong positive relation for job satisfaction with organisational citizenship behaviour. all the four sub dimensions of job satisfaction i.e. supervisor satisfaction, co worker satisfaction, personal growth satisfaction and job security and compensation had significant

influence on both the sub dimensions of employees organisational citizenship behaviour i.e. organisational citizenship behaviour (individual) and organisational citizenship behaviour (organisational).

- There was strong positive relation with organizational commitment and organisational citizenship behaviour. All the sub dimensions of employee's organisational commitment i.e. affective commitment and continuance commitment had significant influence on both the sub dimensions of employees organisational citizenship behaviour i.e. organisational citizenship behaviour (individual) and organisational citizenship behaviour (organisational).
- Structural Equation Modeling (SEM) shows that job satisfaction and organizational commitment are acting as the intervening variables unlike visualized in the initial conceptual framework adopted for the study. The direct relationship between innovative HR practices (IHRP) and organisational citizenship behaviour (OCB) imagined earlier in the default model was found to be insignificant in the hybrid model. But IHRP-OCB linkage assumes meaning and significance when organisational commitment and job satisfaction are interposed. The SEM analysis thus established the intervening effects of organisational commitment and job satisfaction in the overall explanation.

7.3 Conclusions

New economic realities have put pressure on the human resource function to demonstrate how it can add value to the firm's bottom line. Early conceptualizations often questioned the function's relevance to organizational effectiveness, mainly for the fact HR was seen to hold a primarily a reactive, administrative role.

This research truly reflects the wide scope of innovative HR practice (from functional activities to wide ranging strategic initiatives) as well as its capability to affect the entire social structure of an organization. Importantly, it also attempts to transfer ownership and responsibility for the Innovative HR Practices process to HR professionals. Thus through this study a wide influence of Innovative HR Practices on the HR outcomes has been brought out.

7.4 Implications to Management Theory:-

In this study the relationship between innovative HR practices and selected HR outcomes is investigated. The current study represents a unique attempt to study the effects of innovative HR practices, with job satisfaction, organisational commitment and organisational citizenship behaviour considered as the consequent variables. Results have affirmed the role of intervening variables such as job satisfaction and organisational commitment in establishing the link between IHRP and OCB obliterating any direct relation between IHRP and organisational citizenship behaviour.

This finding may enable researchers in the human resource management to develop more robust understandings of the positive effects of innovative HR practices on HR outcomes. Thus the present study provides the obvious contribution of weaving up yet another linkage between the two complimentary disciplines of Human Resource Management and Organisational Behaviour.

The present study also contributes to the understanding of OCB by exploring its antecedents and extending the intervening role of job satisfaction and organisational commitment. The findings indicate that a higher level of introduction / initiation and satisfaction of innovative HR practices produces high job satisfaction and organisational commitment

which lead to OCB. The researcher drew upon the perception–attitude–behaviour model to further realise the expected relationship among innovative HR practices, job satisfaction, organizational commitment and organisational citizenship behaviour. consequently, this study makes a contribution to the broader organisational citizenship behaviour literature by manifesting the extended relationship path from innovative hr practices to organisational citizenship behaviour, and demonstrating that innovative hr practices at the organizational level has an effect on employee attitudes and behaviours as well.

7.5 Implications for Managerial Practice:-

This study offers practical implications for employers seeking to motivate employees, and provides insights into why the employees are willing to engage in extra role behaviours in organizations. The IHRP-OCB model will enable the management to identify the paths that lead to OCB and chalk out strategies for making it more effective.

Providing innovative HR practices help organizations convey an impression of employee-orientation through the use of motivational practices that are closely related to the immediate interests of employees, and which are aimed at influencing employee perceptions and attitudes. Moreover, the levels of perceived satisfaction with the innovative HR practices by the employees also encourage employees to be unselfish and altruistic. This turns their emotions into a willingness to engage in extra-role behaviors that are not immediately related to their jobs but are beneficial to their organizations. This would make the organizations more effective in managing human resources especially the firms which are team based.

7.6 Scope for Further Research:-

- Further studies may focus on identifying and comparing the perception of HR managers, line managers and software professionals on innovative HR practices of the company.
- To achieve better refraction and to widen the spectrum of the present set of findings, researchers may also look into the HRM practices and HR outcomes of the software firms based on classification in terms of product-oriented and project or service oriented companies.
- Studies can also focus on innovative HR practices and HR outcomes with reference to life cycle stages of the organisation.
- As longitudinal study affords a better insight into causal relationship, it would be advisable to go for a longitudinal study in further researches in the field where additive and interactive effects of various innovative HR practices on HR outcomes could be unearthed.

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APPENDICES

APPENDIX - I

Dear Sir / Madam,

Kindly go through the instructions carefully and respond to the questions that follow. Response confidentiality is assured. Please do not leave any item unanswered.

The pages of the questionnaire are numbered, and are printed on both sides of the paper. **Please do not skip any page.**

Part I

The purpose of this questionnaire is to gather information about Innovative Human Resource Practices in your organization.

Instructions

This section seeks your opinion about Innovative Human Resource (HR) Sourcing Practices of your organization. “INNOVATIVE HUMAN RESOURCE (HR) / SOURCING PRACTICES”, are any modifications in the existing or established HR / SOURCING practice of the organization, which is both NEW and IMPROVED, even if the modification is by way of adopting or adapting the practices of other organizations. Hence, the terms “Innovative Human Resource (HR) / Sourcing Practices” and “New Improvements Human Resource (HR) Practices” are used interchangeably.

Part I is divided into three sections, namely, A, B and C. In each section, you will find a set of **14 Human Resource (HR) / Sourcing Practice categories**. No organization may be expected to have introduced all possible innovations in any HR / Sourcing Practice category. However,

they differ in the extent to which they have introduced Innovations / New Improvements.

Kindly read the instructions for each part and respond accordingly.

Section A

This section seeks to measure the importance of innovations in HR/ Sourcing practices for achieving organizational objectives. A list of HR / Sourcing practices has been given in the table below. A set of examples is provided along with each practice. Against each of the 14 practices, please indicate **to what extent are the following practices important for achieving the goals of YOUR organisation?** You are requested to candidly reveal the degree of importance you attach to HR practices listed in the following table.

The following four point scale is used to gather your responses. **Your responses can be indicated by an X mark in the appropriate column.**

Please use the following four point scale to indicate your opinion:

- | | | | |
|------------|----------|---|------------------------------------|
| A score of | 4 | = | Very Important (VI) |
| | 3 | = | Somewhat Important (SI) |
| | 2 | = | Occasionally Important (OI) |
| | 1 | = | Not at all important (NI) |

Please take note that your responses for each HR practice, and NOT for the set of examples given along with each practice.

To what extent are the following practices important for achieving the goals of your organisation?

	VI	SI	OI	NI
1. Employee acquisition / sourcing strategies	4	3	2	1
Greater importance attached to fit between person and organizational culture,				
Emphasizing 'career' not 'job' and selling organizational image to attract potential employees				
Referral bonuses				
Sign-on bonuses for new employees				
Psychological testing				
Developing industry academia interface				
2. Employee retention strategies	4	3	2	1
Evolving a pleasant work environment				
Deferred compensation				
Competitive salaries				
Faster promotions				
Greater work autonomy				
3. Compensation and incentives	4	3	2	1
Increasing component of variable pay				
Stock options				
Combining individual and team incentives				
Performance-linked incentives				
Customization of perks to individual needs				
Offering a variety of allowances				
Conducting compensation surveys				
4. Benefits and services	4	3	2	1
Focus on long-term benefits for employees through alternative insurance and health management schemes				
Giving benefits directed at employees' families				
Flexible employee benefits/cafeteria approach				
Child and elder care programmes				
Improvements in retirement benefits				

	VI	SI	OI	NI
5. Rewards and recognition	4	3	2	1
Performance-linked rewards				
Flexible rewards				
Cash rewards for extraordinary performance				
Rewarding team performance				
Best employee awards				
Public recognition of good performance at a company meeting or function				
Recognition from co-workers				
Blend of financial and non-financial rewards				1
6. Technical training	4	3	2	1
Systematic training needs assessment				
Cross functional training				
Providing job relevant training				
Facilitating transfer of training to actual job performance				
7. Management development (MD)	4	3	2	1
Linking MD to individual needs				
Linking MD to organizational objectives				
Using innovative MD methods like stress management programmes				
Adventure training				
Leadership and attitudinal training				
Study leave				
Programmes for women managers				
8. Career planning and development practices	4	3	2	1
Developing career paths				
Providing fast-track career plans				
Providing mentors to employees				
Cross-functional career paths				
Participative career plans				
Career counselling				

	VI	SI	OI	NI
9. Performance appraisals	4	3	2	1
Giving importance to individual				
Appraisals that include team and organizational performance				
Using quantifiable criteria for appraisals				
Participative appraisals				
Open appraisals to increase transparency				
Linking rewards to appraisals 360 ⁰ appraisals				
10. Potential development: Organization-wide management development programme	4	3	2	1
Job rotations				
Use of assessment centres				
Coaching				
Conducting potential appraisals				
11. Succession planning: Management development programme for filling a position with one of the two candidates	4	3	2	1
Identifying replacements				
Provision of fall-back positions in case of failure				
Preparing to assume higher responsibility				
12. Employee relations with a human face: Treating employees with concern	4	3	2	1
Information sharing				
Open and transparent communication				
Family get-togethers				
Respecting employees				
Ensuring fairness in management practices				
Encouraging risk-taking				
13. Employee exit and separation management	4	3	2	1
Extending lifetime benefits to retired employees				
Retirement planning workshops for employees nearing retirement				
Conducting exit interviews				
Outplacement services				
VRS				

	VI	SI	OI	NI
14. Adopting responsibility for socially relevant issues	4	3	2	1
Adult education programmes				
Community development projects				
Concern for greening and environment protection				
Research promotion				

Section B

This section seeks to measure **to what extent have innovations been introduced / initiated, in your organisation, in each of the 14 broad HR / Sourcing Practice categories listed below?** Please note that the HR / Sourcing practices are the same as in Section A. **Please use an ‘X’ mark in the appropriate column to indicate the extent of introduction / initiation of innovative practices in to each category in YOUR organisation.**

- A score of **4** = **To a Great Extent (GE)**
- 3** = **To a Moderate Extent (ME)**
- 2** = **To a Very Little Extent (LE)**
- 1** = **Not Introduced at all (NE)**

Please remember that your responses are sought on each of the 14 broad HR Practice Categories, and NOT on specific examples of Innovations.

Against each of the 14 practices, please indicate **to what extent have innovations been introduced / initiated, in your organisation, in each of the 14 broad HR / Sourcing Practice categories listed below?**

HR Practice Categories	GE	ME	LE	NE
Employee acquisition / Sourcing strategies	4	3	2	1
Employee retention strategies	4	3	2	1
Compensation & incentives	4	3	2	1
Benefits & services	4	3	2	1
Rewards & recognition practices	4	3	2	1
Technical training	4	3	2	1
Management development	4	3	2	1
Career planning & development practices	4	3	2	1
Performance appraisals	4	3	2	1
Potential development	4	3	2	1
Succession planning	4	3	2	1
Employee relations with a human face: treating employees with concern	4	3	2	1
Employee exit & separation management	4	3	2	1
Adopting responsibility for socially relevant issues	4	3	2	1

Section C

This section seeks to measure satisfaction levels with innovations in HR/ sourcing practices introduced in **YOUR** organization. The same set of HR / sourcing practices as given in sections A and B is provided.

Please use an ‘X’ mark in the appropriate column to indicate the level of YOUR satisfaction with each practice innovation that has been introduced in YOUR organization. Please choose only those categories that have been implemented in your organization

Please remember that your responses are sought on each of the 14 broad HR Practice Categories, NOT on specific examples of Innovations.

Please use the following four point scale to indicate your opinion:

- A score of **4** = **Very Satisfied (VS)**
- 3** = **Somewhat Satisfied (SS)**
- 2** = **Occasionally Satisfied (RS)**
- 1** = **Not at all Satisfied (NS)**

To what extent are you satisfied with the implementation of the following HR innovations in your organization?

	VS	SS	RS	NS
HR Practice Categories	4	3	2	1
Employee acquisition / sourcing strategies	4	3	2	1
Employee retention strategies	4	3	2	1
Compensation & incentives	4	3	2	1
Benefits & services	4	3	2	1
Rewards & recognition practices	4	3	2	1
Technical training	4	3	2	1
Management development	4	3	2	1
Career planning & development practices	4	3	2	1
Performance appraisals	4	3	2	1
Potential development	4	3	2	1
Succession planning	4	3	2	1
Employee relations with a human face: treating employees with concern	4	3	2	1
Employee exit & separation management	4	3	2	1
Adopting responsibility for socially relevant issues	4	3	2	1

APPENDIX- II

QUESTIONNAIRE TO MEASURE JOB SATISFACTION

A set of human resource outcomes are given as various parts below Please use a seven point scale to indicate **YOUR** agreement or disagreement with each of the items listed in the questionnaire using a 7 point scale ranging from “**extremely satisfied (7) to extremely dissatisfied (1)** with a midpoint labeled “**neither agree nor disagree**”(4).

1	I am satisfied with the level of job security I have.	7	6	5	4	3	2	1
2	I am satisfied with my pay and fringe benefits	7	6	5	4	3	2	1
3	I am satisfied with the personal growth and development I get in doing my job.	7	6	5	4	3	2	1
4	I am satisfied with the people I talk to and work with on my job.	7	6	5	4	3	2	1
5	I am satisfied with the degree of respect and fair treatment I receive from my boss.	7	6	5	4	3	2	1
6	I am satisfied with the feeling of worthwhile accomplishment I get from doing my job.	7	6	5	4	3	2	1
7	I am satisfied with the chance to get to know other people while on the job.	7	6	5	4	3	2	1
8	I am satisfied with the support and guidance I receive from my supervisor.	7	6	5	4	3	2	1
9	I feel that I am paid adequately for what I contribute to this organization.	7	6	5	4	3	2	1
10	I am satisfied with the independent thought and action I can exercise in my job.	7	6	5	4	3	2	1
11	I am satisfied with the chance to help other people while at work.	7	6	5	4	3	2	1
12	I am satisfied with the amount of challenge in my job.	7	6	5	4	3	2	1
13	I am satisfied with the overall quality of the supervision I receive in my work.	7	6	5	4	3	2	1
14	I am convinced that my future is secure in this organization.	7	6	5	4	3	2	1

APPENDIX - III

QUESTIONNAIRE TO MEASURE ORGANISATIONAL COMMITMENT

Please use a **seven –point scale** to indicate **YOUR** agreement or disagreement with each of the items listed in the questionnaire using a 7-point scale ranging from “ **strongly disagree**”(1) through “**strongly agree**”(7) with a midpoint labeled “**neither agree nor disagree**” (4).

1. I really feel as if my organization’s problems are my own	7	6	5	4	3	2	1
2. I do not feel a strong sense of belonging to my organization	7	6	5	4	3	2	1
3. My organization has a great deal of personal meaning for me	7	6	5	4	3	2	1
4. I feel emotionally attached to the strategic choices of my organization	7	6	5	4	3	2	1
5. The values advocated by top management are aligned with my own	7	6	5	4	3	2	1
6. It would be very hard for me to leave my organization right now even if I wanted to	7	6	5	4	3	2	1
7. It would be too costly for me to leave my organization now	7	6	5	4	3	2	1
8. Too much in my life would be disrupted if I decided to leave my organization now	7	6	5	4	3	2	1
9. I feel I have too few options to consider leaving my organization	7	6	5	4	3	2	1
10. One of the few serious consequences of leaving my organization is the scarcity of current alternatives	7	6	5	4	3	2	1

APPENDIX - IV

**QUESTIONNAIRE TO MEASURE ORGANISATIONAL CITIZENSHIP
BEHAVIOUR**

Please use a **seven –point scale** to indicate **YOUR** agreement or disagreement with each of the items listed in the questionnaire using a 7-point scale ranging from “ **strongly disagree**”(1) through “**strongly agree**”(7) with a midpoint labeled “**neither agree nor disagree**” (4).

1. I help colleagues who have been absent from work	7	6	5	4	3	2	1
2. I help colleagues who have heavy work loads	7	6	5	4	3	2	1
3. I am mindful of how my behavior affects other people’s job	7	6	5	4	3	2	1
4. I go out of way to help new employees	7	6	5	4	3	2	1
5. I take a personal interest in my colleagues’ job	7	6	5	4	3	2	1
6. My attendance at work is above the norm	7	6	5	4	3	2	1
7. I take undeserved breaks at work	7	6	5	4	3	2	1
8. I often complain about insignificant things at work	7	6	5	4	3	2	1
9. I tend to make “mountains out of molehills”	7	6	5	4	3	2	1
10. I adhere to informal rules devised to maintain order	7	6	5	4	3	2	1
11. I attend meetings that are not mandatory but considered important	7	6	5	4	3	2	1
12. I perform duties that are not required but which improve corporate image	7	6	5	4	3	2	1

APPENDIX - V

Demographic Data

Name of the Company : _____

Year of Establishment : _____

Designation : _____

Your Functional area : HR
 Project
 Other

Total Work Experience (in years) : _____

Years with the current company : _____

Gender : Male
: Female

Educational Background : BSc/ B.E./B.Tech.
 M.E./M Tech.
 M.Sc./M.C.A.
 Others

Appendices

Age : Less than 25
 25 - 30
 31 - 40

Thank you very much for your cooperation in filling the questionnaire,

Binoy Joseph
