

# STRATEGIC HUMAN RESOURCE MANAGEMENT IN INDIAN IT COMPANIES: DEVELOPMENT AND VALIDATION OF A SCALE\*

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*In this paper, we have studied the range of Strategic Human Resource Management (SHRM) practices prevalent in the Indian IT industry through content analysis of the Chairperson's speech and Directors' report in the annual reports of 100 IT companies. A scale for strategic human resource practices is developed based on the literature and the SHRM practices prevalent in the Indian industries. This scale was then used to study the extent of SHRM in 100 IT companies. Factor analysis yielded three key facets of SHRM- Employee Growth, Performance Management and HR metrics. Performance Management is significantly correlated with the firm's market performance measured by Tobin's q.*

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**Key Words:** *Strategic Human Resource Management, Content Analysis, Chairperson's Speech, Scale Development, Information Technology*

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## INTRODUCTION

OF late, there has been an increasing interest in the various organisational functions concerning their role in strategy formation. The Human Resource Management (HRM) field has attempted to integrate into the strategic management process through Strategic Human Resource Management (SHRM) (Wright and McMahan, 1992). However, even as the HR function struggles to be recognised in this new role, certain key questions remain. For example, how do we measure the strategic HR function in a company?

This paper attempts to develop a new scale and tests a new method for measuring the extent of SHRM practices prevalent in a company. The new scale and methodology is then validated by studying the relationship between SHRM practices and business results of 100 firms in the IT sector. Earlier studies (Huselid, 1995; Osterman, 1994 and Singh, 2003) have shown significant relationships between SHRM practices and firm performances by using the primary data in the form of questionnaires and interviews from a

cross section of industries. In this paper, we study the SHRM practices of the rapidly growing Indian IT industry by using secondary data in the form of the Chairperson/Director's speech in the annual report. In order to provide an objective means of measurement of the level of SHRM, we have developed and validated a scale for SHRM based on past studies and the state of the current SHRM practices in India. After the scale was developed, the Chairperson/Director's speeches in a sample of 100 annual reports of IT companies were content analysed by an expert panel. Using the new SHRM scale, the companies were rated based upon the extent of SHRM practices prevalent. Finally, the scale was validated by comparing the extent of SHRM practices to objective measures of firm performance.

## Strategic Human Resource Management

Strategic Human Resource Management (SHRM) has been defined as 'the integrated set of practices, policies and strategies through which organisations manage their human capital, that influences or being influenced by

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\* The reviewer of the paper does not subscribe to the statistical analysis done in the paper for scale development.

the business strategy, and the organisational context and socio-economic context' (Martin-Alcazar, Romero-Fernandez, and Sanchez-Gardey, 2005). The entire work on the Strategic Human Resource Management (SHRM) from 1970 till date can be classified into four perspectives viz. the universalistic perspective, the contingency perspective, the configurational perspective, and the contextual perspective (Martin-Alcazar, Romero-Fernandez, and Sanchez-Gardey, 2005).

### The Universalistic Perspective

The universalistic perspective is the most basic framework in SHRM. It presumes that if a particular practice is related to performance for a statistically significant sample, it can be extended to the entire population (Delery and Doty, 1996). Hence, the task of researchers is to identify human resource practices which: (i) have demonstrated capacity to improve organisational performance and (ii) are generalisable (Becker and Gerhart, 1996).

Within the universalistic domain, studies adopting the functional excellence perspective, study the effectiveness of human resource practices like training (Russell, Terborg, and Powers, 1985) and staffing practices (Terpstra and Rozell, 1993). A closely related though not identical thought is expressed by Osterman (1994) and Pfeffer (1994) when they advocate the use of 'high performance work practices' or the 'best practices.' Pfeffer (1994) argued that greater use of 16 management practices, such as participation and empowerment, incentive pay, employment security, promotion from within, and training and skill development results into higher productivity and profit across the organisations. Similarly, Osterman (1994) found that a number of innovative work practices, such as teams, job rotation, quality circles and total quality management result in productivity gains for all American organisations.

Some critics of the universalistic perspective (Brewster, 1999 and Maurice, 1976) claim that it is too simplistic to assume that a certain practice will be equally effective across the industries, situations and different cultural contexts. However in the light of strong empirical evidence of the linkage of certain human resource practices with firm performance (Arthur, 1994; Delaney and Huselid, 1996; Delery and Doty, 1996; Huselid, 1995; Huselid, Jackson and Schuller, 1997) the universalistic perspective continues to be the most popular and dominant paradigm of Strategic Human Resource Management.

### Strategic Human Resource Management in India

The roots of SHRM in India can be traced back to the early 1920s when the Tata Group implemented basic employee welfare measures. In the 1980s, the personnel function was rechristened into Human Resource Development (HRD) or Human Resource Management (HRM) (Singh, 2003). In the recent years, there have been a number of studies related to SHRM practices in the Indian context (Budhwar and Sparrow, 1997; Budhwar and Sparrow, 2002; Singh, 2003; Sparrow and Budhwar, 1997).

### Strategic Human Resource Management and Firm Performance

Numerous studies have shown strong empirical evidence of the linkage of certain human resource practices with firm performance (Arthur, 1994; Delaney and Huselid, 1996; Delery and Doty, 1996; Huselid, 1995; Huselid, Jackson and Schuller, 1997). Arthur (1994) identified a cluster of practices, which would designate the human resource practices as either control or commitment. He found that having a committed human resource system leads to lower scrap rates and higher efficiencies.

In his classic study of 968 firms, Huselid (1995) explored the impact of high performance work practices on performance. Huselid classified high performance work practices into two factors viz. employee skills and organisation structures and employee motivation. The measure for the employee skills and organisation structures included enhanced selectivity, formal training and quality of work life programmes, quality circles, information-sharing programmes, formal grievance procedures, and profit and gain-sharing plans. The measure for employee motivation included formal performance appraisals, linking those appraisals tightly with compensation and focusing on employee merit in the promotion decisions. The study showed that high performance work practices led to significant benefits in terms of corporate financial performance through the intervening mechanisms of lower employee turnover and higher productivity.

Studies in the Indian context have found that alignment of HR practices with business strategy (Singh, 2003) and extent of integration of HR practices (Budhwar and Sparrow, 1997) are related to firm performance. Singh (2003) gives two reasons why SHRM may have an impact on the firm performance. Firstly, companies engaged in SHRM practices are likely

to have a cost advantage due to reduction in employee absenteeism and turnover rates. Secondly, firms engaged in SHRM practices lay greater emphasis on the development of their employees into a competent workforce. This is likely to produce a competitive advantage that is more valuable, and difficult to imitate (Barney and Wright, 1998 and Pfeffer, 1994).

Most of the empirical studies of SHRM practices and firm performances have evaluated cross sectional data across firms of different industries. These studies have been criticised for arriving at general conclusions without taking into account the contextual and industry related factors (Brewster, 1999 and Maurice, 1976). Some studies have controlled for industry level effects by incorporating a number of industry level and dummy variables (Huselid, 1995), while others (Delery and Doty, 1996) have confined their studies to a single industry. In this paper, we limit our study to the Indian IT industry.

### **The Indian IT Industry as a Context for Studying the SHRM Performance Relationship**

Osterman (1994) studied 694 U.S. manufacturing establishments and found that establishments differed in the extent of their adoption of what he termed as 'flexible manufacturing practices' depending upon the nature of markets, strategy, technology and values. The specific factors that predicted the use of these practices were being in an internationally competitive product market, having a technology that requires high levels of skills, following a strategy that emphasises variety, service and quality rather than low cost, and using human resource practices such as high levels of training and innovative pay systems.

The Indian Information Technology (IT) industry embodies each of the above characteristics. 64.4 per cent of the IT revenues come from exports (Nasscom, 2006). As compared to other industries, IT requires high levels of technical and people skills (Thibodeau, 2006). In the highly competitive market, most companies are seeking to differentiate themselves based on service and quality. IT firms were the first to introduce innovative compensation like employee stock options schemes (ESOPs).

In a study of 137 Indian companies, Budhwar and Sparrow (1997) found that high growth firms were most likely to have a high level of integration between their HR practices and business strategies. The IT industry in India, employing more than a million persons, accounts

for 4.8 per cent of India's Gross Domestic Product and is estimated to grow by 28 per cent in 2006 (Nasscom, 2006). The growth rates are one of the highest in the industry and thus this industry is likely to have highly integrated HR policies.

The IT industry is a service industry that is both labour and skill intensive and although India has always had a large talent pool in these sectors, it is only in the past 10 years or so that Indian industries have leveraged such talent (Kambhampati, 2002). A number of reasons have been proposed to explain India's success in the software industry like, India's emphasis on tertiary education, support from expatriate Indians, government's policies of liberalisation and the innate mathematical abilities of Indians. The software industry has also been successful in attracting the best talents because of relatively high salaries, attractive working conditions, training facilities and opportunities for travel. Access to this large pool of skilled talent has made India a cost effective option for software development, and a number of companies from the developed countries have outsourced their software development to India (Balasubramanyam and Balasubramanyam, 1997).

However, due to the growing demand, there has been a shortage of talent in the industry. Because of this, there has been a steep increase in the salaries and the number of training institutes for software training is on the rise (Thibodeau, 2006). Companies are going beyond merely giving salaries to retain and engage their employees. The software industry has spawned a number of innovative HR practices to source, retain and develop their talent. The motivation for software industries to engage in innovative human resource practices is twofold. On the one hand, there is the struggle to source and retain trained professionals in a rapidly growing industry. On the other hand, in order to remain competitive, they are under pressure to leverage their labour to the maximum extent in order to achieve profitability. When a highly labour-intensive industry is faced with such a dynamic situation, SHRM practices become critical to the survival of a company.

Hence, we hypothesise that IT firms using SHRM practices will perform better than IT firms which do not use SHRM practices (Hypothesis 1).

In addition, we hypothesise that the extent of use of SHRM practices will be related to the performance of the firm (Hypothesis 2).

### Measurement of the Extent of Strategic Human Resource Management Practices

All empirical studies on SHRM and firm performance in India and abroad have relied on primary data in the form of questionnaires distributed to employees of the companies being studied. The respondents of the self-report questionnaire have been either senior human resource professionals (Huselid, 1995; Delery and Doty, 1996), line managers of the unit (Osterman, 1994), head of the human resource function (Budhwar and Sparrow, 1997; Singh, 2003) or a combination of the human resource managers and line managers (Huselid, Jackson and Schuller, 1997). Except Huselid (1995) where content analysis of annual reports was used to validate the SHRM scale, we did not find a single study in which the data of SHRM practices was collected by any method other than a survey of employees of the company being studied. This was very surprising, considering that self-report measures are known to be the most vulnerable aspect of research in Organisational Behaviour and Human Resource Management (Donaldson and Grant-Vallone, 2002; Podsakoff and Organ, 1986). Studies have shown that subjective ratings are a poor substitute for the independent judgments (Organ and Ryan, 1995). When we solicit people's judgment about the existence or effectiveness of organisational process, we are not asking them to report on a specific event, instead we expect respondents to engage in higher-level cognitive processes like inference and evaluation. Three serious problems plague this type of research. Firstly, respondents desire to maintain a consistent line in a series of answers giving rise to what is known as the Consistency Motif. Secondly, respondents have laid the theories regarding interrelationships among organisational phenomena, and they may tend to overemphasise the strength of the empirical relationships that they have observed in their experience. Thirdly, respondents may have a tendency to respond in a socially desirable manner (Arnold and Feldman, 1981; Podsakoff and Organ, 1986).

Another significant factor affecting the validity of the survey method is the response bias due to low rates of response like 28 per cent (Huselid, 1995); 21 per cent (Delery and Doty, 1996); 30 per cent (Budhwar and Sparrow, 1997); or 23.4 per cent (Singh, 2003). Such low response rates are not likely to capture a representative sample of the population being studied.

The use of a single respondent for measuring a firm's human resource practices has been criticized (Gerhart, Wright and McMahan, 2000) and subsequently defended

(Huselid and Becker, 2000), however we have still not seen any attempts at finding an alternative to the survey method in assessing the SHRM practices of companies. Hence, this paper evaluates content analysis of the annual reports as an alternative to survey research to identify the extent of SHRM practices in the companies.

### Content Analysis of Annual Reports as an Alternative to Survey Research

Content analysis was first used more than 200 years ago to analyse textual material from newspaper and magazine articles, advertisements, political speeches, hymns, folktales and riddles. It has since been applied to diverse fields including psychology, anthropology, education, linguistics, and history (Krippendorff, 1986). Harwood and Garry (2003) describe content analysis as a method for analysing the content of the visual and verbal data enabling the reduction of phenomena or events into the defined categories for better analysis and interpretation.

The annual report is a public document prepared by all companies traded on the stock exchange, and it contains the financial information as well as the narratives about the activities of the firm. The annual report is often the first document examined by the potential investors and hence it forms an important strategic communications document outlining the strategic direction of the company over the next three to five years (Peslak, 2005).

Annual reports have been often used in the business research. Jarvenpaa and Ives (1990) reviewed the CEO's letter to shareholders for 528 annual reports from 1982 to 1987 in order to determine the role that the CEO sees for Information Technology in their overall corporate strategy and the relationship between mention of IT and overall firm profitability. Similarly, Peslak (2005) compared annual reports of companies from 1998 to 2002 to determine the strategic importance given to IT. Other information gleaned from the content analysis of annual reports includes corporate rhetoric (Hyland, 1998); environment characteristics (Keats and Hitt, 1988); ethical orientation (Halici and Kucukaslan, 2005); predicting profitability (Beynon, Clatworthy and Jones, 2004) and estimating likelihood of failure (D'Aveni and MacMillan, 1990).

We found just one instance of the use of content analysis of annual reports in the area of SHRM by Huselid (1995) that worked on the premise that 'if a firm's senior managers saw human resources as crucial to organisational performance, it would communicate

this importance to the external audiences' (pp.647). Hence, the contents of the President's letters and management discussions of annual reports were analysed for references to the importance of the human resources, human capital, personnel, people, employee, staff or the workforce. The firms that made such comments were coded and subsequent analysis showed that employee skills and organisation structure scores of firms citing the importance of human resources was significantly higher than that of those making no such comments (Huselid, 1995).

Thus, the content analysis of annual reports promises to be a significant source of secondary data on the firm's SHRM practices. Considering the limitations of the self-report survey based research and the time and effort involved in collecting data through questionnaires, it is worthwhile to investigate the validity of using secondary data in the form of Chairperson/Director's speech in the annual reports.

## Methods

### Instrument for Measurement of Strategic Human Resource Practices

The earliest checklist containing seven items for the measurement of SHRM practices was created by Devanna, Fombrun, Tichy and Warren (1982). This

checklist was later used with minor modifications by Huselid (1993) in his study of 968 firms of diverse industries. Huselid (1995) identified 13 'high performance work practices' as information sharing, job analysis, promotion from within, employment test, attitude surveys, labour-management participation, training, grievance procedure, performance linked compensation, incentive plans, performance appraisal, merit based promotion, and selectivity in recruitment.

In order to check if Huselid's (1995) list of best practices was relevant in the current Indian context, a pilot study was undertaken of 100 companies across a range of industries. The companies listed in the Bombay Stock Exchange (BSE) 100 Index were taken as a representative of the Indian industry and sections of the annual reports were content analysed for references to Human Resource Management practices. The range of human resource practices identified were then grouped together into a set of six practices viz. employee involvement, talent management, employee development, performance management, efficiency of HR processes, and measuring HR. The first four practices matched with corresponding practices in Huselid's (1995) list, while the last two practices viz. efficiency of HR processes and measuring HR were unique practices identified by our pilot study which were included in the list. The definitions and range of each of the six practices is listed in table 1.

**Table 1: List of Strategic HRM Practices**

Sr. No.	Strategic HRM Practice	Description	Examples
1.	Employee Involvement	Extent to which there are structured initiatives for involvement and empowerment of employees	Information sharing plans, Suggestion schemes, Surveys of attitude/ organisational health, Total Productive Maintenance Total Quality Management Six Sigma
2.	Talent Management	Extent to which a structured approach is used for identifying and developing talent	Job analysis, Recruitment strategy, Competency development Leadership development Succession planning
3.	Employee Development	Extent to which systems and processes for learning have been set up	Training process, Tie ups with educational institutes, Own training infrastructure
4	Performance Management	Extent to which there are formal systems for measurement, review and improvement of the performance of individuals	Employee motivation programmes, Pay for performance, Variable pay Incentives, Competency assessment, ESOPs
5.	Efficiency of HR Processes	Extent to which the HR processes have been electronically enabled to improve efficiency and service levels	E-enablement of HR processes, Implementation of ERP software, Knowledge management
6	Measuring HR	Extent to which HR processes and outcomes are being measured	Balanced score card, Assessing the value of HR

### Sample

The Center for Monitoring Indian Economy (CMIE) database-Prowess contains groups of companies based on the industry of operation. The IT Services category contained 176 firms of which financial data was available for 143 firms. The annual turnover for 2005 of the 143 firms ranged from rupees 8.90 million (US \$0.19 million) for M/s. Women Networks Ltd. to rupees 80,510 million (US \$ 1735.88 million) for M/s. Tata Consultancy Services Ltd. From this sample, we selected the top 100 firms based on sales turnover, the smallest company being M/s. IKF Technologies Ltd. having an annual sales turnover of rupees 87.10 million (US \$ 1.88 million) in 2005.

### Measures of Firm Performance

For measuring firm performance, it is recommended to use multiple measures (Venkatraman and Ramanujam, 1986). Indicators of firm performance used in the studies of SHRM practices have varied along two dimensions. Measures have either been perceptual (Delaney and Huselid, 1996) or objective (Huselid, 1995), and either intermediate like sales growth, employee productivity and employee turnover or macro level measures like Tobin's  $q$  and Gross Return on Capital Employed (GRCE) (Huselid, 1995). Singh (2003) used three measures of performance *viz.* return on assets, growth in sales, and price-cost margin.

In this study, we have used three accounting measures of performance and one market measure of performance. Following Singh (2003), the accounting measures of performance used are average return on assets for the years 2003 - 2005 (ratio of operating profit to total assets); average annual growth in sales for the years 2003 - 2005, and average price-cost margin for the years 2003 - 2005 (ratio of profit before depreciation interest and tax to net sales). The market measure of performance used was Tobin's  $q$ .

### Measurement of Tobin's $q$

Conceptually Tobin's  $q$  measures the value added by management and is usually calculated by dividing the market value of a firm by the replacement cost of its assets. However, in the Indian context, firms do not report the replacement cost of their assets, hence following Khanna and Palepu (2000) we have used the book value of assets instead of replacement value of assets. Tobin's  $q$  has been calculated as the average

market capitalisation of the firm over 365 days divided by book value of the assets. Following Huselid (1995) we have used the logarithm of Tobin's  $q$  in our study.

### Control Variables

Following earlier studies, we have controlled for the effect of firm size in terms of total sales and for age of the firm in terms of number of years since incorporation (Huselid, 1995).

### Data Collection

Chairperson's speech and Directors' reports for the year 2004 were downloaded from the Center for Monitoring Indian Economy (CMIE) database-Prowess. Since documents for 2004 were not available for 8 firms, we used the reports from 2005 for 5 firms and 2002 for three firms.

Coding of annual reports was done by volunteering students who were about to graduate from a two year full time post graduate course in Personnel Management and Industrial Relations. Each of the four volunteering students was given 25 reports. To check for inter rater reliability, 50 reports were analysed by two students. Prior to doing the analysis, those students were briefed about the objective of the study, and the methodology of content analysis. In order to familiarise the students with the process and the SHRM practices template, a trial annual report was content analysed by each student and its results discussed in the presence of one of the authors.

Coders were told to read the Chairperson's speech and Directors' reports and identify the evidences of the six SHRM practices. If any of the SHRM practices were observed, the company was rated on the practice on a scale of 1 (low level of SHRM practice) to 3 (high level of SHRM practice).

### Analysis

#### Scale Reliability and Validity

Inter-rater reliability measured in the form of intra-class correlation coefficient was found to be .65 ( $p < .01$ ) for single measures. Cronbach Alpha for the six-item scale for SHRM was .70. We performed an exploratory factor analysis using principal component analysis with the varimax rotation and found that there were two factors (i) employee involvement, employee development, talent

management and performance management, and (ii) measuring HR and efficiency of HR processes. However, the two factors were not distinct and while both the factors i.e. measuring HR and efficiency of HR seemed to be related to getting a cost benefit to the firm, we did not find any common theme across the other factor. Hence, we explored a three-factor solution and found three distinct factors. The first factor consisting of employee involvement, employee development and talent management is related to enabling the employees to grow through involvement, learning or promotions, and hence was called employee growth.

The second factor purely consisted of the performance management. The third factor, consisting of measuring HR and improving the efficiency of HR processes, was focused on enhancing the value creation from HR processes, and was called HR metrics. The results of the factor analyses are shown in table 2a and table 2b respectively. The reliability (Cronbach alpha) of the factors employee growth and HR metrics was .73 and .54 respectively. Reliability for the factor performance management could not be calculated since it was a single item scale. Despite the obvious limitation of a single-item scale for performance management and the low reliability of HR Metrics, the three-factor solution is preferred over the two-factor solution achieved in the exploratory factor analysis. There are two main reasons for accepting the three factor solution. First performance management with its emphasis on monitoring and rewarding individual performance is conceptually distinct from the employee growth and this distinction is clearly brought out only in the three factor solution.

Second, the factor HR metrics represents the increasing drive towards the measurement of HR and calculating the return on HR. Hence, on theoretical and

**Table 2a: Results of Factor Analysis (two factor solution)**

	Component	
	1	2
Employee involvement	.77	
Performance management	.71	
Talent management	.69	.32
Employee development	.60	.47
Measuring HR		.89
Efficiency of HR processes	.30	.73

Values less than .30 have not been displayed. Extraction method: Principal Component Analysis. Rotation method: Varimax with Kaiser Normalisation. Rotation converged in 3 iterations.

**Table 2b: Results of Factor Analysis (three factor solution)**

	Component		
	1	2	3
Employee involvement	.91		
Employee development	.67	.36	
Talent management	.66		.30
Measurement of HR		.94	
Efficiency of HR processes	.42	.66	
Performance management			.96

Values less than .30 have not been displayed. Extraction method: Principal Component Analysis. Rotation method: Varimax with Kaiser Normalisation. Rotation converged in 5 iterations.

conceptual grounds, the three factor solution is preferred and used for subsequent analysis.

### Extent of SHRM and Firm Performance

Means, standard deviations and zero order correlations for all variables are shown in table 3. Our visual analysis of the data revealed that in a number of cases the factor values were zero (employee growth, 60; performance management, 58, and HR metrics, 88). Hence, we used ANOVA to identify if there was any significant difference in the dependant variable with respect to different values of the independent variable. ANOVA was done for each of the four dependant variables and each of the three independent variables. Results of the ANOVA are reported in table 4.

### Results

Our results on the extent of SHRM practices prevalent in the Indian IT industry are similar to those of Huselid (1995) who found only 41 per cent of firm's whose annual reports were content analysed, and mentioned any SHRM practices. In the case of the Indian IT industry, we find 48 per cent of the companies had at least one of the three SHRM practices. Specifically the proportion of companies that mentioned the three SHRM practices viz. employee growth, performance management and HR metrics were 40 per cent, 42 per cent, and 12 per cent respectively. The extremely low occurrence of the factor HR metrics could either be because the practice is just being adopted by firms or perhaps Indian firms do not use the annual report to share their HR practices.

The ANOVA reveals three significant relationships, performance management and HR metrics with Tobin's

**Table 3: Means, Standard Deviations and Zero-order Correlations for All Variables**

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Employee growth	.39	.67	(.73)								
2. Performance management	.96	1.23	.36**	–							
3. HR metrics	.14	.46	.45**	.12	(.54)						
4. Log of Tobin's <i>q</i>	.29	.41	.15	.30**	.26**	–					
5. Average sales growth 03-05	.14	.86	-.09	-.08	-.12	.24*	–				
6. Average return on assets 03-05	.07	.12	.18	.02	.22*	.40**	.54**	–			
7. Average cost-price margin 03-05	.22	.19	.05	.04	.09	.36**	.13	.57**	–		
8. Age of the firm (years since incorporation)	14.84	7.75	.09	.02	-.03	.20*	.07	.17	.08	–	
9. Sales (in rupees crore)	388.18	1304.63	.30**	.19	.41**	.36**	.03	.36**	.10	.39**	–

Note. Coefficients alphas are in parenthesis along the diagonal. N varies from 91 to 100.

\* $p < .05$ . \*\* $p < .01$ .

**Table 4: F Values for ANOVA**

	Average return on assets 03 - 05	Average annual growth in Sales 03 - 05	Average price-cost margin 03 -05	Log of Tobin's <i>q</i>
Employee growth	.80 (.58)	.46 (.85)	.32 (.94)	.97 (.45)
Performance management	.41 (.74)	.29 (.82)	.75 (.52)	3.70** (.01)
HR metrics	2.95** (.01)	.53 (.70)	1.28 (.27)	2.31* (.05)

Note. Figures in brackets indicate significance levels ( $p$  values)

\* $p < .05$ . \*\* $p < .01$

*q*, and HR metrics with return on assets. We investigated these relationships further using regression analysis to check if these remained significant in the presence of the control variables (see table 5). The factors performance management and HR metrics continued to have a significant impact on Tobin's *q* even after

controlling for the effect of sales and age of the firm. A box plot showing the effect of performance management on Tobin's *q* is shown in Figure 1. Thus, our two hypotheses are partly supported.

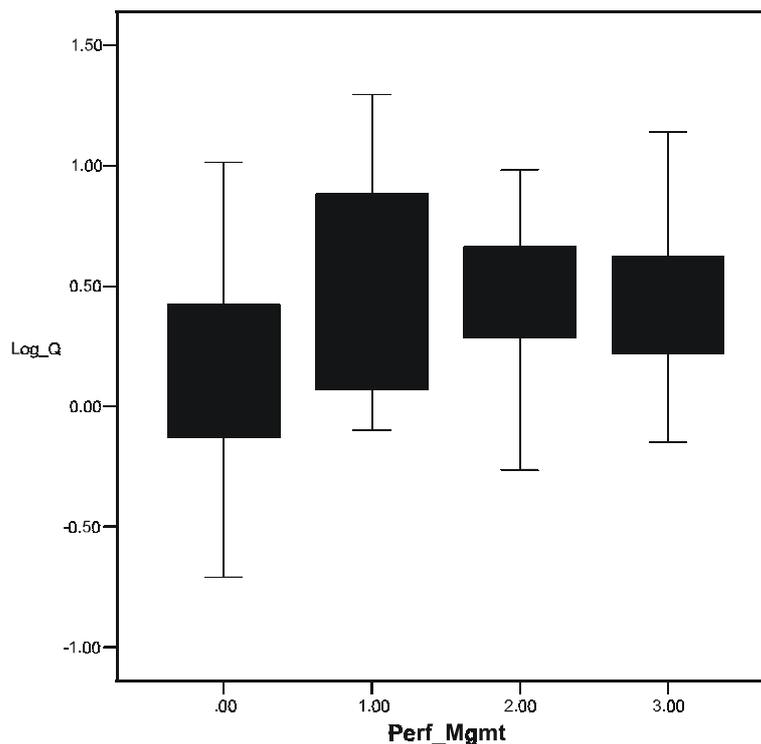
There are three significant findings in this study. The first is that none of the accounting measures of

**Table 5: Results of Regression Analysis to Check the Effect of Dimensions of SHRM on Log of Tobin's *q***

Predictor	$R^2 = .17$ . $F = 4.79$ ***					
	<i>b</i>	<i>SE b</i>	95% CI		$\beta$	<i>t</i>
Constant	.07	.09	-.11	.27	.00	.81
Employee growth	-.06	.06	-.20	.07	-.10	-.93
Performance management	.09	.03	.02	.16	.27	2.63**
HR metrics	.16	.09	-.03	.35	.18	1.63*
Age of firm (in years)	.00	.00	-.05	.01	.12	1.15
Sales (in Rs. crore)	.00	.00	.00	.00	.21	1.81*

Note.  $N = 91$ .

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$



**Figure 1: Box Plot Showing Variation in Log of Tobin's  $q$  with Performance Management**

performance were significantly related to the SHRM practices. One of the main reasons for this could be the differences in the accounting policies followed by companies (Venkatraman and Ramanujam, 1986). Another reason for this could be the huge disparity in the sample, which had companies ranging from a sales turnover of rupees 8.90 million (US \$0.19 million) to companies having a turnover of rupees 80,510 million (US \$ 1735.88 million). The lack of results could be attributed to the abnormally high growth rate of start up is not related to SHRM practices.

The second finding is that employee growth consisting of employee involvement, talent management and employee development has no significant impact on the business performance. This is hardly surprising considering that we studied annual reports and business results that were just a year apart. Investments in employee growth are likely to show up gradually over the long term.

The third finding is the relationship of performance management and HR metrics with Tobin's  $q$ . Even if we disregard the relationship of HR metrics with Tobin's  $q$  because only 12 of the firms had non-zero values for the variable, the relationship of performance management with Tobin's  $q$  is worth investigating. Performance management is defined as the extent to which there are

formal systems for measurement, review and improvement of the performance of individuals. This includes employee motivation programmes, pay for performance, variable pay incentives, competency assessment and employee stock option plans (ESOPs). Conceptually the dependant variable, Tobin's  $q$  is a measure of the value added by the management (Huselid, 1995). Our study seems to validate that strong performance management system is a powerful force to superior value creation by the management team.

Our findings are highly consistent with Huselid (1995). Huselid's factor of employee motivation comprising of formal performance appraisals, linking appraisals tightly with compensation and focusing on employee merit in performance decisions is very similar to our factor of performance management. Huselid found that employee motivation was not directly related to accounting measures of performance; however, it was highly related to Tobin's  $q$ .

## Discussion

This paper contributes to the literature on SHRM in three ways. First, it establishes the use of content analysis of the Chairperson/Director's speech as a valid tool for studying SHRM practices. Secondly, the scale

for SHRM with its six dimensions of employee involvement, talent management, employee development, performance management, efficiency of HR processes and measuring HR can be an important tool for future studies. Finally, our results show the linkage between robust performance management systems and business performance.

While we see a lot of promise for further studies using the scale and the methodology of content analysis, we can also see serious limitation of this approach. Our study is limited to the scrutiny of Chairperson's speech and Directors' reports of just one year. This may be too small a sample to predict the firm performance. Second, our measures of firm performance as business or market results are too limited. In order to show a true picture, researchers must explore more holistic models of business performance (Venkatraman and Ramanujam, 1986) which must also include intermediary operational variables like employee turnover and employee productivity (Huselid, 1995). Third, we have used the three-factor solution instead of the two-factor solution, which came up in the exploratory factor analysis. Future studies must validate the three-factor solution on larger samples. Finally, the single-item for measuring performance management and the low reliability of the factor HR metrics seriously limit the value of this scale for SHRM practices.

While we have attempted to reduce the effects of self-report bias (Organ and Ryan, 1995; Podsakoff and Organ, 1986) by using secondary data, our study is not completely free of this bias since the Chairperson's speech and Directors' report are also self-report documents. Further studies should attempt to capture objective measures of existence of SHRM practices in firms.

An interesting finding of this study is that only 48 per cent of the companies had some mention of SHRM practices. Huselid (1995) found that 41 per cent of the companies in his sample mentioned HR practices in their annual report. Considering that the IT industry has one of the most progressive HR practices in India, we would expect an even lesser proportion of companies to mention SHRM practices in the annual reports in a cross industry sample. It would be useful to investigate whether this reflects the prevalence of these practices in the Indian industry or it is an artifact of our methodology. Further studies will be required to understand the role of the Chairperson's speech and Directors' report within the Indian cultural context.

## CONCLUSION

The paper studies the range of SHRM practices prevalent in the Indian IT industry through the methodology of content analysis of the Chairperson's speech and Directors' report in the annual reports. The scale developed for the range of SHRM practices in the Indian context has been validated using independent experts, and has shown a satisfactory level of inter-rater reliability.

This scale was used to rate 100 IT companies to study the extent of SHRM. Our factor analysis identified three facets of SHRM, *viz.* employee growth, performance management, and HR metrics. Employee growth being a long-term investment did not show any relationship with the business results. However, performance management significantly correlated with the firm's market performance measured by Tobin's *q*.

The validation of the SHRM scale and content analysis of the annual reports as a methodology has significant implication in terms of enabling future research in the area of SHRM. Earlier studies using survey methods were not only time consuming and tedious, but also were subject to various biases due to self-reports of organisational process and low response rates. Using content analysis of annual reports and the SHRM scale for measuring the extent of SHRM practices provides an alternative measure for SHRM research.

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