

# Analyzing the Impact of HR Analytics on Organizational Performance of IT Industry – Mixed Methodology Approach

Paleti Narendar<sup>a\*</sup>, Mridula Mishra<sup>b</sup>

<sup>a\*</sup> Research Scholar (Management), Mittal School of Business, Lovely Faculty of Business and Arts, Lovely Professional University.

<sup>b</sup> Professor and Head of Department, Mittal School of Business, Lovely Professional University, Phagwara, Punjab.

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## ABSTRACT:

**BACKGROUND:** The companies are moving from intuition-based practices to evidenced based practices as human capital is considered as the core for every organization. The companies found a new technology HR Analytics which helps in unbiased decision making, thus increasing employee satisfaction apart from other benefits.

**OBJECTIVE:** The aim of this research is to find such HR practices after implementation of HR Analytics, its affect on organizational performance.

**METHODS:** As HR Analytics is in infancy stage and most of the research is carried on exploratory methodology. The researcher has used mixed methodology, firstly qualitative methodology by way of open-ended structured questionnaire is used to collect the data and analyzed the interview transcripts by using NVIVO 11 to obtain the themes and quantitative methodology is used for analyzing the total of 100 sample from the Middle and Upper-level HR employees from CMM LEVEL 5 IT companies in Hyderabad region that have implemented HR Analytics

**RESULTS:** A total of 19 themes were obtained and are supported with the help of literature review, such themes are used as items in the quantitative questionnaire having five point likert scale. After validation and reliability tests, the final questionnaire responses were collected from 400 target population and were analyzed using SPSS 22 software. The responses were then analyzed by using Pearson Correlation and regression analysis.

**CONCLUSIONS:** The results stated the practices after implementing HR Analytics are found to significant, however, there is need to implement more Artificial Intelligence practices in all areas of HR functions. There is a significant affect of HR Analytics on organizational performance.

**Keywords:** evidenced based practices; HR practices; mixed methodology; Artificial Intelligence practices; organizational performance

## INTRODUCTION

Human Resource Management refers to the tactics, procedures, and structures that firms employ to manage their most precious resource, namely their people. HRM, according to Wright and McMahan, is about well-planned HR deployment and activities aimed towards attaining the organization's goals. To put it another way, HRM is concerned with how a company utilizes its full set of practices and rules[1], in order to increase its overall performance and productivity. By digging into the intricacies of HRM practices and Performance Linkages, the current study envelops the strategic linkage between HR practices and company performance [2].

## SIGNIFICANCE OF THE HR PRACTICES ON THE PERFORMANCE OF THE IT INDUSTRY

**HR Management Best Practices in IT-ITES Companies:** Despite the fact that many studies have been conducted in the past addressing investment in HRM practices and organisational performance, there is still a scarcity of studies that create or demonstrate the links between HRM practices and performance, either directly or indirectly. The current study is being carried out in the same vein, but for the IT-ITES industry in Hyderabad region, in order to determine which main practices are prevalent in the aforementioned sectors, which are generally practiced, and which are fewer commonly practiced or assigned less significance [3]

**HR-Related Performance in a Variety of Situations:** Despite the fact that there are around 35 to 40 HRM practices, the current study comprehensively identify just a few or key HRM practices [4] that are widely accepted or applied by a few organisations in the industry.

**Organizational Productivity in a Variety of Forms:** Various performance outcomes may be used to evaluate HRM practices based on a range of factors. The present study covers HR or Employee Outcomes and Organizational Results [5] among the four key performance outcomes, which include Market Growth and Monetary Results.

### 1. HR PRACTICES IN INDIA

HRM refers to policies and procedures associated with carrying out the 'human resource parts of a management role, such as human resource planning, job analysis, recruiting, selection, orientation, remuneration, performance assessment, professional development, and labour rights. HRM is the subject of a great deal of research because of its relevance in business management and the influence it has on the company's success. HRM is a prominent topic of study for academic and business scholars since a firm's performance is mainly determined by the combined performance of employee. Apart from communication with tools and systems [6] , HR practices such as job analysis, recruitment, training and development, work environment, and performance evaluation may enhance the competence of employees for high performance. Relations with employees working within departments, and the mutual benefits of such successful collaboration determine operational success Because competent persons are the sector's source of competitive advantage, human resources are the heart of the IT business. Since it employs novel work culture

practices such as virtual offices and virtual migration, the IT-ITES industry is regarded to be the liveliest by nature [7]. However, there is a high attrition rate, a lack of job satisfaction, employee job hopping, flexibility, and individualization, all of which are regular occurrences in the business and are a big source of worry for the IT companies. Human resource procedures in Indian IT firms differ significantly [8] from those in manufacturing and other service sectors, such as employee sourcing and human resource development initiatives.

Recruitment and selection techniques are being viewed as a tool for accomplishing strategic objectives. Some of the most common recruitment strategies include ongoing recruiting, employee referrals, realistic job previews, and the formulation of clear-cut selection criteria. The lengthy success of every firm relies on the growth and training of its employees. Employee training and development enables employees to learn the skills and competencies they require to help their businesses improve their productivity and profitability [9].

## **2. REVIEW OF LITERATURE**

[10] defined that the employee behaviour is frequently included in theoretical models in strategic human resource management research as essential mediating relationships among human resource practices and firm performance. Just about all empirical SHRM research to date, however, has overlooked the mediating hypothesis and focused solely on the direct link between HR practices and corporate results. The goal of this research is to see if there's a link among HR policies and employee behaviour. We investigated the connection between HR procedures and collective behaviours mediated by collective attitudes using a sample of 174 independent work groups. The findings show that attitudes play a role in mediating the link among HR policies and employee behaviour. The direct and indirect associations shown in this study back up the idea that attitudes and actions mediate the impact of HRM practices and business results. The relevance of using multilevel theory and methodology is demonstrated by these results, which show the different consequences of HR policies [11]

[12] observed that the ability to contribute of suitable bundles of HR practices in inspiring well-being and performance in older workers is gaining momentum as retirement ages rise and the workforce matures. Based on lifespan development and self-regulation theories, we defined two categories of HR practices: development HR policies that help people attain greater levels of functioning and upkeep HR practices that help people maintain their existing levels of functioning in the face of new obstacles. Furthermore, based on lifespan theories, we expected and discovered that the relationship between development HR practices and well-being weakens with age, whereas the relationship between maintenance HR practices and well-being, as well as advancement HR practices and employee performance, reinforces. A third set of 'job enrichment' HR practices emerged, which increased job performance from among elderly.

[13] analyzed that the human resources are an organization's most important asset and a tool for gaining a competitive edge. Human resource management is more difficult than managing technology or money, therefore an effective HRM system is required for efficient leadership. Solid

HRM practices should be backed up by a strong HRM system. HRM practices are a set of organisational actions aimed at managing a group of human resources and ensuring that they are used to achieve corporate objectives. The goal of this study is to see how HRM procedures including selection, training, career planning, remuneration, performance assessment, job description, and employee engagement affect employee perceptions of their performance. The findings of this study explain why HRM choices are likely to have a significant and distinctive impact on organisational success. This academic forum will aid in the advancement of research on the relationship between human resource management and organisational effectiveness. Unresolved issues tries to identify problems that need further investigation and offer many ideas to help scholars working on these questions produce a more comprehensive body of knowledge with important consequences for body theory and practice. The relationship between systems of High-Performance Work and company performance was thoroughly examined in this study. These strategies have an economically and statically relevant influence on employee performance, according to results based on a nationwide sample of organisations. There was no evidence to back up claims that the influence of High Performance Work Practices on business performance is partly determined by their interdependencies and ties to strategic plan.

[14] demonstrated that the Information and Communication Technology sector is heavily investing in high involvement HR practices to retain and motivate the information technology professionals who are the human capital assets. This study defines a multi dimensional HR practices and test its influence on turnover intentions (TOI) of ICT professionals. Organizational commitment is defined either as an employee attitude or as a force that binds an employee to an organization. There are very few studies on the effects of organizational commitment on TOI among ICT professionals. The present research focuses on examining the mediating effect of organizational commitment on HR practices and TOI relationship. The results of this study partially support the prediction. HR practices - compensation and training, has a significant direct effect on TOI and the contribution of organizational commitment to TOI is observed when combined with HR practices in the model. Implications of these results are discussed.

### **3. RESEARCH METHODOLOGY**

- **Problem Statement**

Since HR Analytics is still in infancy stage and existing studies are being done by using qualitative approach, the researcher has decided to use mixed methodology in order to bring more stability to the research. Very less amount of research had been carried on the Impact of HR policies on the organizational performance in IT industry especially in the parameters of working efficiency and how this efficiency will lead to the high level of performance of the organization in terms of profitability and satisfaction of the employees among them and suggest to the management regarding the parameters of the HR practices which are having the significant impact on the performance of them for the future implementation of the practices.

- **Objectives of the Study**

1. To assess the existing HR practices in IT Industry and reasons for using HR Analytics in IT Industry
2. To measure the influence of Human Resource Analytics and the organizational performance in IT industry
3. To prepare the recommendation and give suggestions to IT industry

#### **4. SIGNIFICANCE AND SCOPE OF THE STUDY**

The study basically tries to focus on the main parameters of the HR practices in Indian IT industry especially for the parameters considering the different factors of them and also to check what are the significant impact of the HR practices it on the performance of the organization in terms of the performance improvement of the organization and employee in terms of cost reduction and increased morale of the employee which have been reflected in the overall performance of the employee and organization.

- **Sampling Design**

**Sample Size:** For qualitative study 16 middle and upper level HR employees and a total 100 samples that have been collected from the different IT firms form the India by considering the Top level and Middle level HR employees among the organization for quantitative anlaysis.

**Sampling Technique:** Snowball Sampling

- **Data Collection Tools and Techniques:**

An open ended questionnaire has been used and in depth interviews have been conducted. After Interviews the same were validated through respondent validation. Then the responses were analyzed and obtained the themes. Such themes were used to prepare he questionnaire is used as an instrument for data collection. A close ended 5 point likert scale questionnaire having ‘Not At All’ to ‘Very Great Extent’. The structured questionnaire is been framed and the responses have been collected from Top level and Middle level HR employees to identify the most important used HR practices and to measure the influence on organizational performance.

- **Variables of the Study**

From the qualitative study HR practices themes such as Data Driven Practices, Artificial Intelligence , Statistical Evaluations , Assess & Analyze , HR Information Systems , Decision Making , Revising the training structure & material , Key parameters identification , Work culture , Understanding the employee and themes that impact organizational performance like Reduced Costs, Increased Employee Performance, Employee Retention, Effective and Efficient Budget planning, Employee Engagement have been obtained.

- **Hypothesis of the Study**

The Hypothesis of the study has been mentioned below by considering the relationship among the dependent and independent variable of the study i.e. dependent variable and independent variable.

The Hypothesis of this study has been mentioned below:

**H0:** There is no significant relationship between the factors of the HR practices in India and the benefit that have been received after the successful implementation of the HR practices in IT industry.

**H1:** There is significant relationship between the factors of the HR practices in India and the benefit that have been received after the successful implementation of the HR practices in IT industry.

**Null H<sub>02</sub>: r = 0**

[No association exists between HR Analytics and Organizational Performance i.e Reduced Costs, Employee Performance, Employee Retention, Effective and Efficient budget planning and Employee Engagement

**Alternative H<sub>A2</sub>: r = 0**

There Exists a relationship between HR Analytics and Organizational Performance i.e Reduced Costs, Employee Performance, Employee Retention, Effective and Efficient budget planning and Employee Engagement

## 5. DATA ANALYSIS AND INTERPRETATION

From the Table 1, it can be seen the important parameters of the HR practices that have been implemented in the many firms of the IT companies in the Indian context. The highest importance that have been given by the IT employees in this survey is to the “we can also infer that Statistical Evaluation and HRIS practices are mostly used followed by Data Driven , Assessment and Analyze practices and Artificial Intelligence is the least used”.

From the Table 2, It can be seen in the that Sourcing The Job Applicant and Reduced Biasness have greater significant than the Decision Making, Work Culture, and Revision Of Training Structure & Material, hence we reject the null hypothesis for these dimensions and we accept the null hypothesis for the dimensions i.e Employee Participation, Tracking The Employee Background, Attrition Reasons

From Table 3 we can infer that all the Pearson’s correlation coefficients there is a high positive correlation between HR Analytics and Reduced Costs, Employee Performance, Employee Retention, Effective and Efficient Budget Planning, and Employee Engagement. hence, we reject the null hypothesis and accept the alternate hypothesis

## 6. FINDINGS AND CONCLUSIONS

From the above study it can be seen that the survey was basically conducted among the IT employees in the Indian context to measure the effectiveness of that policies for the successful implementation of it among them. Form the study it can be seen that Artificial Intelligence

Practices are least used and HR Analytics is not being used tracking the employee background, to find the attrition reasons and for employee participation and the organizational performance is increased by the help of HR Analytics as the HR practices implementation are having the more effect out of the total benefit received by them out of the successful implementation of these HR practices.

## 7. RECOMMENDATIONS OF THE STUDY

The above study will help the company to understand the importance of the Artificial Intelligence from the point of view of all the stakeholders i.e. Company, Employees, Government and HR practitioner's in the actual competitive market. There is need to implement HR Analytics in all the areas of HR and Artificial Intelligence Practices has to be improved.

### DIRECTIONS FOR FUTURE RESEARCH

As HR Analytics is in infancy stage, the new technologies like Artificial Intelligence are not been used to the fullest. Hence, there is a need to concentrate on data extraction tools that can be used in Artificial Intelligence and their effectiveness. However, this has to be studied after Artificial Intelligence has been used fully in HR Analytics.

**Table 1 – ASSESSING HR PRACTICES IN IT INDUSTRY**

<b>HR PRACTICES</b>	<b>t-Value</b>	<b>Sig(1-tailed)</b>	<b>Mean</b>	<b>Mean Difference</b>	<b>Decision</b>	<b>Result</b>
Data Driven	27.501	.000	3.71	1.458	Reject H <sub>0</sub>	Significant
Artificial Intelligence	27.372	.000	3.10	1.303	Reject H <sub>0</sub>	Significant
Statistical Evaluation	27.271	.000	4.32	1.513	Reject H <sub>0</sub>	Significant
Assesment & Analyze	26.507	.000	3.58	1.405	Reject H <sub>0</sub>	Significant
HRIS	28.943	.000	4.25	1.508	Reject H <sub>0</sub>	Significant

(Sources: Research Outcome)

**Table 2:**

<b>Coefficients<sup>a</sup></b>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.222	.212		1.101	.271		
	Sourcing The Job Applicant	.163	.042	.241	5.869	.000	.859	1.164
	Chat Bots	.125	.041	.178	4.336	.000	.865	1.156
	<b>Tracking The Employee Background</b>	<b>.005</b>	<b>.042</b>	<b>.006</b>	<b>.150</b>	<b>.982</b>	<b>.816</b>	<b>1.225</b>
	Decision Making	.102	.038	.137	3.166	.002	.772	1.296
	Revision Of Training Structure & Material	.055	.037	.086	2.073	.039	.844	1.185
	<b>Attrition Reasons</b>	<b>.051</b>	<b>.030</b>	<b>.079</b>	<b>1.863</b>	<b>.078</b>	.811	1.232
	Work Culture	.132	.031	.180	4.388	.000	.863	1.159
	<b>Employee Participation</b>	<b>.045</b>	<b>.037</b>	<b>.061</b>	<b>1.458</b>	<b>.175</b>	<b>.831</b>	1.204
	Reduced Biasness	.175	.031	.230	5.697	.000	.892	1.122

a. Dependent Variable: HR\_Analytics

Reason for using HR Analytics = - 0.222 + .163 (AI for Sourcing The Job Applicant) + .125 (Chat Bots)+ 0.005( AI in Tracking The Employee Background) +.102( right Decision Making) +.055(Revision Of Training Structure & Material) +0.051(identifying the Attrition Reasons) +0.132 (Work Culture) +.045(Employee Participation) +.175(Reduced Biasness)



**Table 3 Assessing the association between using HR Analytics and Organizational Performance**

Correlations							
Dimensions		HR_Analytics	Reduced Costs	Employee Performance	Employee Retention	Effective and Efficient budget planning	Employee Engagement
HR_Analytics	Pearson Correlation	1					
Reduced Costs	Pearson Correlation	.725**	1				
Employee Performance	Pearson Correlation	.727**	.482**	1			
Employee Retention	Pearson Correlation	.657**	.556**	.529**	1		
Effective and Efficient budget planning	Pearson Correlation	.554**	.524**	.602**	.553**	1	
Employee Engagement	Pearson Correlation	.493**	.491**	.437**	.554**	.493**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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#### **AUTHORS' BIONOTES**



**Paleti Narendar**, Research Scholar (Management), Lovely Faculty of Business and Arts, Lovely Professional University. He is an entrepreneur with experience in HR especially Labour Laws. He is an empanelled in Ministry of Corporate Affairs as conciliator and mediator and an eligible Independent Director.

Email: [paletinarendar@rediffmail.com](mailto:paletinarendar@rediffmail.com), Mobile: 9490997774



**Dr. Mridula Mishra** is Professor and Head at Mittal School of Business, Lovely Professional University, Phagwara, Punjab. Has more than 22 years of experience in academics, research and hospitals. Completed her Ph. D in Psychology from Banaras Hindu University (B.H.U.), Varanasi. Her research is focused in the areas of Clinical Psychology, Yoga Psychology, Compensation, Performance Management, Employee Engagement, Leadership, Creativity, Innovation, HR analytics. She received SIS best research award and 3 times best paper award from SIS centre Anchorage, Alaska, USA

Email : [mridula.mishra@lpu.co.in](mailto:mridula.mishra@lpu.co.in) Mobile : 9815622851