

## HR Analytics: Is It A Myth Or Reality In An Organization?

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### Abstract

Today's globalized world is making the organizations to face the huge problem of SUSS (Susceptibility, uncertainty, sophistication and sustainability) in the business environment. This proactive business environment is stimulating the business leaders to design certain levers and models to cope with the uncertainty in business. To enhance business performance and to gain competitive advantage designing an effective Talent Pool is of utmost important. Thus HR Analytics is the only tool which can help companies to recruit the right talent, organize them correctly and retaining the high performers. Masese Omete Fred, Dr. Uttam. M.Kinange (2015) defined HR Analytics as a data-driven framework for solving workforce problems using existing information to drive new insights. It helps in decision making process with a combination of software and methodology that uses statistical models to employee related data, allowing enterprise leaders to optimize human resource management .The basic purpose of this paper is to study whether HR Analytics is a myth or reality in an organization. To support the purpose a model "BLEND" has been designed to evaluate five perspectives of HR Analytics i.e. Business objectives, Leadership initiatives, Establishment technically upgrading , Negotiating with HR metrics, Data Analysis and Integration. The Model is validated by a survey of a sample of 22 respondents consisting of 5 HR executives and HR managers of logistic companies and 17 HR executives and HR managers of manufacturing companies in West Bengal. A Questionnaire based on Renesis Likert 5-point Scale is designed on the basis of five perspectives of Model "BLEND" of HR Analytics in Sales and Marketing Division in the above companies. The value of Cronbach's alpha of the questionnaire is 0.9501 and validity of the questionnaire is tested through content validity. The data is analysed by Kruskal – Wallis (or H test) a non-parametric test which is analogous to the one-way analysis of variance which revealed that there exists a significant difference of HR analytics perspectives between manufacturing and logistics companies. The percentage analysis of data revealed that HR analytics of manufacturing companies is ahead of Logistic companies as per the model "BLEND".

**Keywords:** *HR Analytics, Susceptibility, Sustainability, HR metrics, Kruskal – Wallis, BLEND*

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## Introduction

**“ Ksheeyante Sarvadaanaani Yagya homabali Kriyaah  
Na Ksheeyate Paatradaanambhayam Sarva dehinaam”**

(AS PER CHANAKYA NITIS)

The above line speaks that the effect of gifting, rewarding donations disappear over time but when given to the right person survive forever. When taken to management concept that an organisations should rejuvenate an organisation’s reward policies by utilizing them for productive and deserving employees on the basis of their performance. Thus how to identify the potential employee in the organisation .What is the parameter to benchmark their efficiency and effectiveness? The need of the hour has given birth to the concept of Human Resource Analytics. Human Resource Analytics basically integrate the business data with the people data strategically focusing that what human resource department in the organization does and what is the business return the organization is getting . Human resource analytics (HR analytics) is an area in the field of analytics that defines the application of analytic processes to the human resource department of an organization in order to improve the employee performance level and therefore enhance the organization’s productivity and getting a better return on investment. HR analytics not only gathering data on employee but also it seek to provide insights into each business process by using data to make relevant decisions, improve the processes and operational performance (Soumyasanto Sen,2015). ABN Amro has been practicing since 2013 with an HR analytics team (Bekkering, 2014). Cascio and Boudreau (2010) explained four levels of sophistication used by Google’s People Analytics Group. The four levels are counting, clever counting, insight and influence. Each particular level requires mastery of the lower levels. The level Counting consists of all relevant data about the workforce which are tracked, organized and accessible. Clever counting using the basic data from counting to extrapolate new insights. Insight tries to find the drivers from the trends, which has been extrapolate by clever counting. The highest level, influence, apart from measuring the outcomes also giving a shape to the outcomes .Thus the focus objective is to ensure that managers should have a shared understanding of the goals and the levers or the drivers they can pull to achieve those goals. To quote Mark Berry,VP of HR,CGB Enterprise Inc.(2016) that “In today’s workplace ,analytics can play a critical role in both identification of transformational opportunities and evaluation of transformational opportunities and evaluation of transformational impact .When you consider the factors affecting a global workforce...workforce analytics provide the means for organizations to be able to identify areas of opportunity, prioritize the opportunities and evaluate the impact of human resource transformational”. HR analytics can establish a tangible link between the people strategy and the organization’s performance.

## Literature Review

Today when the whole world is facing the problem of high attrition the only solution is to design an effective HR analytics which can not only satisfy the employees but also increase the return on

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investment of the company. To gain competitive advantage, companies should nurture and align Human capital management with core business objectives. HR analytics encompasses different perspective of Human Resource along with Business objectives.

### **Evolution of HR Analytics**

Dr. Jac Fitz-enz (2010) mentioned in his work “ The HR Analytics – Predicting the Economic value of your Company’s Human Capital Investment “ that in 1970s, they have initiated their study in HR to experiment with simple cost, time, and quantity metrics in order to evaluate that HR was at least manage the expense and create some value. Cindy Waxer (2013) outlined in his study that the exercise of human resources analytics dated as far back as 1984 with respect to Jac Fitzend, author and president of HR services organization Saratoga Institute, published How to Measure Human Resources Management, a influential work outlining the HR metrics for effective measurement of employee performance. Thus from an experimental approach for managing the workforce, HR analytics has taken birth by focussing on strategic tools for improving various HR aspects i.e. employee satisfaction, boosting retention rates, calculating compensation, forecasting workforce deficiencies and flagging star performers for special attention. In August 2012, IBM bought talent management software provider Kenexa for a massive move of \$1.3 billion. SAP (with SuccessFactors) and Oracle (with Taleo) also made acquisitions to enter into this field while smaller players like Visier and Evolv gain ground with highly scalable, cloudbased tools. Thus HR analytics is an expanding field. Researchers from Bersin & Associates projected that the global market for integrated talent management technologies will grow 22 percent to nearly \$4 billion this year—almost double the growth rate of 12 percent in 2011-2012.

Masese Omete Fred , Dr. Uttam. M.Kinange (2015) emphasized that from Harvard Business Review Analytic Services interviews and from other researches found five stages of HR Analytics evolution : Overreliance on Managerial Judgment Such As Intuition and Instincts, Use of Analytics in a Few Departments, Expanding Use Of Analytics In Several Departments, Noted By An Increasing Amount Of Collaboration, Scaling Decision Making Throughout All Ranks Of The Organization In An Integrated, Holistic Approach, Continuous Improvement built on an evolving technology,

A 2015 Economist Intelligence Unit survey found that 82% of organizations plan to either begin or increase their use of “big data” in HR over the next three years. CEOs are recognizing the importance of talent-related data in managing recruitment, retention, turnover and more.

Rutger Johannink (2015) highlighted in his study that the significance of HR analytics in 2025 will be very high. Organizations will consider HR Analytics as an essential part of Human Resources and a central linkage in the decision making process. It is predicted in 2025 that HR analytics will not only influence the decision making process of the organizations by providing appropriate facts and figures but also provide predictive capabilities and also ensure that HR analytics would be induced with every aspect that is people-centric.

## Models of HR Analytics

To streamline the HR process and Business Process, researchers and consultants have projected various factors, steps and maturity models that could be used by HR Department for analytical purpose for smoothing various HR practices and processes.

HR analytics is based on statistics from within and outside the HR function (Boudreau & Ramstad, 2006). Jac Fitz-enz (2010) emphasized in his paper ““ The HR Analytics – Predicting the Economic value of your Company’s Human Capital Investment” that Predictive management, or HCM:21, is the outcome of our eighteen month study called the Predictive Initiative. This model is the first holistic , predictive management model came into existence in the last quarter of 2008 which is a operating system for the human resources function.HCM:21 is a four-phased model which starts with scanning the marketplace and ends with an integrated measurement system.In the middle, it deals with workforce and succession planning in a new way and focussing on optimization and synchronization of the delivery of HR services. He has outlined the process by explaining the market or external and internal forces that affect human, structural and relational capital. He has considered risk assessment as a fundamental part of modern human capital management and framed a model for workforce planning that replaces the industrial-era, gap-analysis, structure-focused practice of filling, positions as needed with the concept of generating human capability.

Lawler et al. (2004) indentified three different kinds of metrics applied for HR analytics: efficiency metrics which focuses on the performance of the HR function with respect to the efficiency in fulfilling its basic administrative functions, effectiveness metrics which deals with the evaluation of the HR programs and practices how far they are affecting the people towards which they are directed, in a way they are expected and impact metrics tried to establish a link between what HR does and what are the tangible effects on the organization’s potentiality ,sustainability and in gaining competitive advantage. Davenport, Shapiro and Harris ( 2010) framed a ladder of talent analytical applications and the DELTA model - which stands for data, enterprise, leadership, target and analysts - for successful implementation of analytics.

Inostix (2011) explained about the HR value chain, as implemented by made by Brian Welle, people Analytics manager, Google. The first step is opinion, the second step is data which is about structured, but raw information. Metrics, the third step in the HR value chain, showing the trends based on ratio and counts .The fourth step deal with analysis which is meant to draw correlations and show relationships which is followed by the step called insight. The step insight leads to action and influence the decision making process and the process is terminated by the final step called action which is meant to change the process or policy. Thus the step insight is very important for HR analysts to work towards the insight, and even action step, in order to have influence on the decision making process.

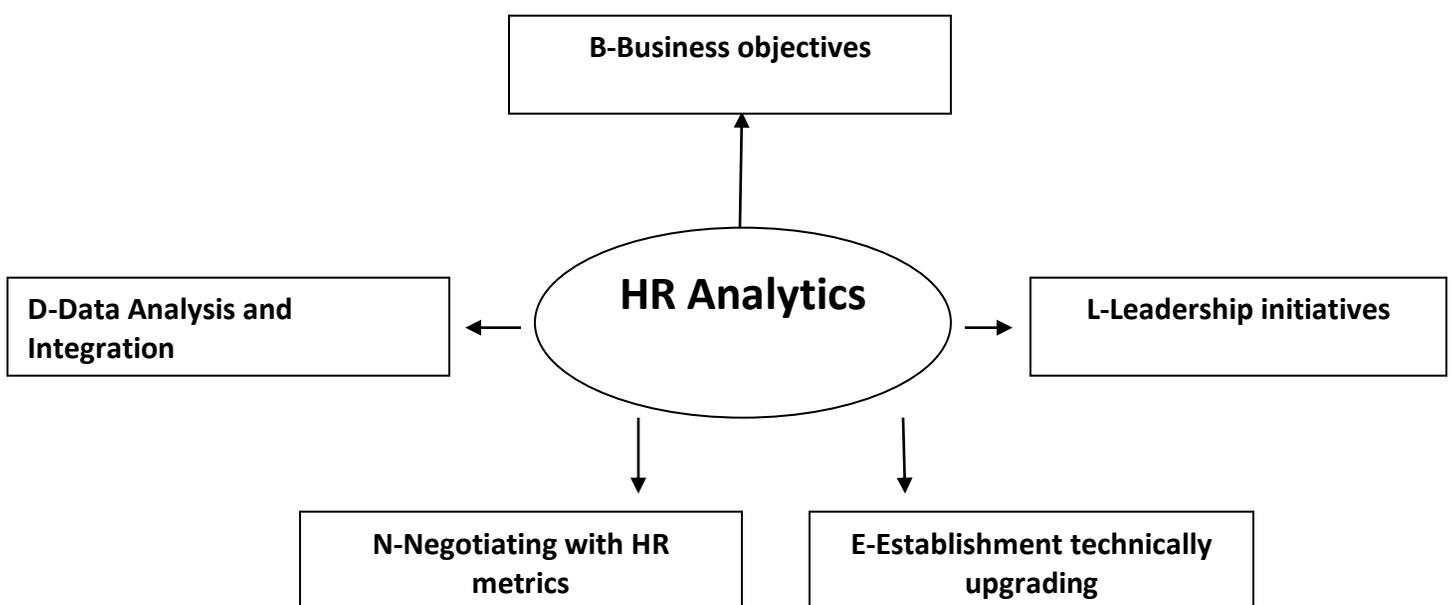
Mayo (2006) identified that HR analytics can be collected from seven types of data i.e. workforce statistics, financial ratios relating to people and productivity, measures of people’s values, measures

of people’s engagement, measures of efficiency of the HR function, measures of effectiveness of people processes and measures of investment in one-off initiatives and programs. Levenson (2011) emphasized that an organisation should have a strong analytic culture which is to be based on decisions at every level to be based on data.

Lije George and T. J. Kamalanabhan (2016) identified the factors that can influence acceptance of analytics in the human resources (HR) function. The factors are categorised into individual factors (Analytical skills, Performance expectancy, Readiness to change, Understand Importance ,Voluntary use ,Opportunities to use), organisational factors (Training, Top management support, Analytical Culture, Organisational size, Vision for using analytics, Data sharing and access, Visionary, Top management influence, Resources ,Availability of data, Business type) and technological factors.

**Model “BLEND”**

Based on the above literature reviews regarding different models and factors designed for HR Analytics , the author has made an attempt to design a model named “BLEND” to support HR analytics . The model “BLEND” evaluate HR analytics in an organisation on five perspectives given as follows:



**Business Objectives-** The Business objectives perspective focuses on whether -1. Business Objectives are considered while framing HR analytics programme. 2. Employees are aware of the business objectives .3. The annual turnover and annual report are transparent to employees.4. Employees views are encouraged while designing Business objectives.5.Business impact of HR programs and process are measured .

**Leadership initiatives-**This perspective determine- 1. leadership development program are considered to drive better business results.2. Managerial span of control affect sales results.3. Analyze the gap by identifying workers with strong leadership qualities and flagging those that

are unlikely to mesh with a company's corporate culture. 4. Analyze the customer satisfaction with leadership styles of employees statistically.

**Establishment technically upgrading** -This perspective deals with whether-1. Technology is highly upgraded to implement HR Analytics.2. Systems and tools are technically developed to manage data from multiple sources.3. HR is ensured to access all required data.4. HRIS is developed with understanding of all business requirements.5. Operating any specific software for HR analytics.

**Negotiating with HR metrics**- This perspective focuses on HR metrics adapted from Dulebohn & Johnson, 2013: (73---74) that is whether organisation is incorporating the different HR metrics in their HR Analytics i.e. Cost per hire , HR expense per employee, Yield ratios, Time to fill the open positions, Absent rate , Expense factor, Profit per employee, Labour cost factor, Human capital value added revenue, Involuntary and voluntary separation, Firm salary/competitor salary ratio, Number and quality of cross-functional teams, Progression of employees through development plans, Percentage of total salary at risk and Demonstrating a relationship between a particular HR metric and other metrics in the organisation.

**Data Analysis and Integration**-This perspective emphasized on whether 1. Data is relevant to Business Objective.2. Using Data on internal employee characteristics and external labour market to run statistical models on drivers of employee turnover.3. Establishing a correlation between data on employees' productivity and organization's productivity.4. Pursuing statistical analysis of data on Return on investment and HR expense.5. Designing a model showing interrelationship of HR data with other data in the organisation.

### **Objectives of the study**

1. To explore the extent to which HR Analytics followed by manufacturing and logistic companies in Sales and Marketing Division in West Bengal based on the model “BLEND”.
2. To study whether there exists any difference of HR Analytics in manufacturing and logistics companies in Sales and Marketing Division in West Bengal based on the model “BLEND”.

### **Research Methodology**

To test the Model “BLEND” a sample of 22 respondents have been selected comprising of 5 HR executives and HR managers of logistic companies and 17 of manufacturing companies in West Bengal. The five perspectives of “BLEND” has been selected i.e. **Business Objectives, Leadership initiatives, Establishment technically upgrading, Negotiating with HR metrics,**

**Data Analysis and Integration.** A Questionnaire based on Renesis Likert 5-point Scale is designed on the basis of five perspectives of Model “BLEND” of HR Analytics in Sales and Marketing Division in the above companies. The value of Cronbach’s alpha of the questionnaire is 0.9501 and validity of the questionnaire is tested through content validity. The responses to the questionnaire were collected either at a face-to-face meeting, over email or over the telephone.

**Hypothesis**

H0-There exists no significant difference of HR Analytics perspectives between logistic and manufacturing companies.

HA- There exists significant difference of HR Analytics perspectives between logistic and manufacturing companies.

**Analysis of the data**

The data is analysed by Kruskal – Wallis (or H test) a non-parametric test which is analogous to the one-way analysis of variance. The Test Statics

$$H = \left[ \frac{12}{n(n+1)} \sum_{j=1}^c \frac{T_j^2}{n_j} \right] - 3(n+1)$$

Where n is the total number of participants (all groups combined). Tj is the rank total for each group. nj is the number of participants in each group. The sampling distribution of H can be approximated with a chi-square distribution with (k-1) degrees of freedom.

<i>The Kruskal-Wallis test or H test</i>			
<i>Logistic companies</i>		<i>Manufacturing companies</i>	
<i>Sum of all the ranks</i>	<i>No of respondents</i>	<i>Sum of all the ranks</i>	<i>No of respondents</i>
<i>15</i>	<i>5</i>	<i>238</i>	<i>17</i>
<i>Calculated Value of H=11.087</i>			
<i>Degrees of Freedom=2-1=1</i>			
<i>Tabulated value of H or Chi square at 5% level of significance=3.841</i>			

Since the calculated value of H is greater than Tabulated value of H i.e.  $11.087 > 3.841$ .

So, the null hypothesis is rejected and alternative hypothesis is accepted i.e. There exist significant difference of HR Analytics perspectives between logistic and manufacturing companies based on model “BLEND”

#### Percentage Analysis of Data

	Logistic	Manufacturing
<i>Business Objectives</i>	49%	79.53%
<i>Leadership initiatives</i>	57.00%	83.82%
<i>Establishment technically upgrading</i>	60%	80.24%
<i>Negotiating with HR metrics</i>	58.40%	79.61%
<i>Data Analysis and Integration</i>	57.6%	79.29%

The percentage analysis of data revealed that HR analytics of manufacturing companies is ahead of Logistic companies in every aspect.

#### Findings

It is summarised from the data that HR Analytics is not a myth in an organisation. It may be at a nascent stage in some of the organisations whereas it is in full-grown stage in other organisations. As per the Model “BLEND” the data analysis revealed that there exists a significant difference of HR analytics perspectives between manufacturing and logistics companies. According to the views of the respondents, 79.53% , 83.82%, 80.24%, 79.61% and 79.29%, in manufacturing companies believe that Business objectives, Leadership initiatives, Establishment Technically upgrading, Negotiating with HR metrics, Data Analysis and Integration is incorporated in their HR Analytics respectively whereas it is of 49% ,57% ,60% ,58.40%, 57.6% in Logistic companies.

#### Recommendations.

To quote Rober Bolton ,a KPMG Advisory partner and HR Transformation expert in the UK, “I believe that well thought out predictive HR analytics could become as important to the CEO as the balance sheet and P&L statement.” These lines signifies that to handle the competitiveness in the market every company irrespective of the type of business they handle and type of customer they deal ,HR Analytics is very much important to handle the talent pool. As per my survey it is suggested for the logistic companies that –

1. Number of recruitment of HR executives should be increased so that HR analytics could be done in more systematic and convenient manner.
2. There should be decentralization of power for handing the HR analytics as most of the HR

executives in the Regional office are not aware of all the perspectives of HR analytics followed in their company .

3. Employees should be aware and their views should be encouraged while designing the business objectives.
4. Proper system is to be developed to measure the business impact of HR programs and process.
5. HR metrics should be properly followed while evaluating an employee.

For the manufacturing companies it is suggested that-

1. Induce new HR analytics into the profession of HR experts to enhance their analytical understanding.
2. Top management should thrive more investment on HR Analytics through more evidence –based HR research projects.

### **Conclusion**

There is a momentum gain in accelerating the HR analytics as most of the CEO's are realizing that human capital considered to be the main source of sustainable economic value (IBM's Fifth Biennial Global CEO Study from 2012). HR analytics should be evolved and go beyond of basic HR functions where it will take an "outside-in" approach so that HR could be part of value chain analysis . HR analytics are a key responsibility for HR Team in an organization for a proactive role in driving business strategy. It not only enhances business performance but also increase employee engagement and satisfaction. It has been rightly said that "No one can predict the future course of the HR profession. No one can predict how HR practices will change in the future. Thinking about the future, however, helps us to prepare for it. Thinking about the future may lead to innovative insights. Thinking about the future may help to change today's HR practices in positive ways." (Ulrich, 1997: 231).

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