

# Applying Data Analytics for Human Resource Management: Opportunities & Challenges

Niharika Atchyutuni<sup>1</sup>, P. Vijay Kumar<sup>2</sup>

## Abstract

The HR function, which earlier relied more on the cognitive and intuitive abilities of people at the helm, is fast becoming data-driven. Everything has to be proved and proved with reliable data for any important decision to be taken, as it impacts the business at the end of the day. The solution lies in the application of Data Analytics in the area of Human Resource Management. Data Analytics has started adding immense value to the HR discipline as more and more strategic decisions are being taken based on the insights provided by its application in organizations. This paper proposes to understand how organizations can employ Data Analytics for improving their people management function. A qualitative analysis will be presented on the information gathered from both primary and secondary sources to understand what organizations have done to leverage their data for better decision-making at the strategic level. It is also proposed to understand the factors that have been deterring organizations from adopting analytics for people management.

**Keywords:** HR Analytics; Factors; Strategic; Challenges; Leadership.

## Introduction

Data Analytics has long transformed the way data is analyzed and the way business decisions are taken. The HR function however lagged most of the other business functions like Marketing, Sales, Operations Management, Purchase, and Financial Management when it came to adopting analytics. Nevertheless, the new premise is that accurate and reliable people management decisions based on data analytics are going to impact the business in a big way. These decisions are in fact considered to be the most significant, because if the people decisions are right, which means that organizations are recruiting, rewarding and retaining the right people, then they

would make all the right decisions for the business to thrive.

Analytics has transformed HR into a more reliable and authentic strategic partner. One of the disadvantages of HR earlier had been the intuitive decision-making approach. Analytics has equipped HR with facts and figures which have empowered it to speak the business language and share the table with other functions like production, marketing and finance. Though it cannot be claimed that HR has gained the targeted expertise, it is certainly moving in the right direction to leverage the enormous data available with it for improved performance of business as a whole.

Over the last few years, there has been a lot of discussion in the industry as well as the academia on the effectiveness of data analytics in creating value for the organization. In the process, it has been realized that Data Analytics can help in defining the strategic contribution of HR.

---

**Author's Affiliation:** <sup>1</sup>Assistant Professor, Vignana Jyothi Institute of Management, Hyderabad, Telangana State, India - 500090. <sup>2</sup>Director, SMS-JNTUK, Kakinada, Andhra Pradesh, India - 533003.

**Reprint's Request:** Niharika Atchyutuni, Assistant Professor, Vignana Jyothi Institute of Management, Hyderabad, Telangana State, India - 500090.

E-mail: a.niharika@vjim.edu.in

Received on 13.06.2018, Accepted on 20.06.2018

## Proposed Process for Implementing HR Analytics

There is enormous amount of data being generated across the globe. Rapid technological development

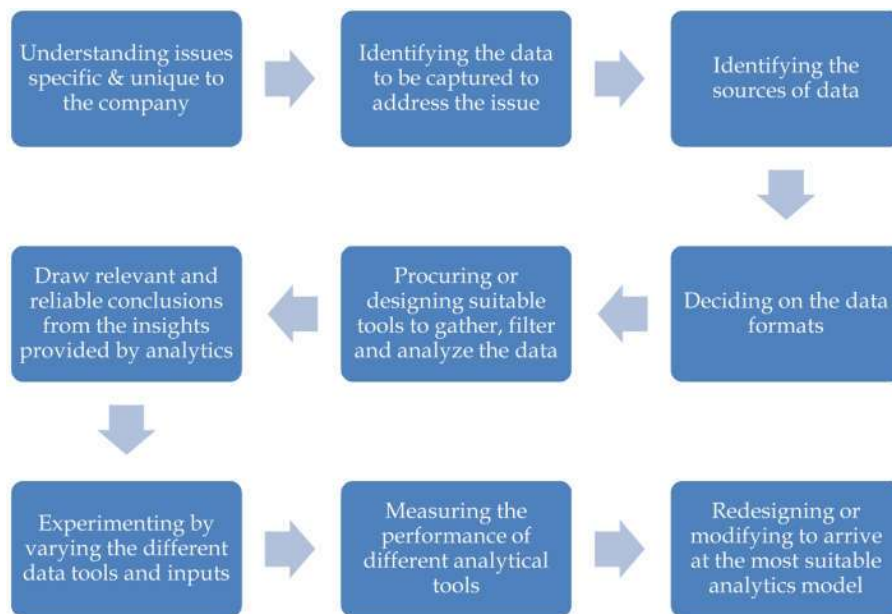
leading to improved tools to capture data and enhanced capabilities to analyze them, is one of the biggest drivers.

The speed at which the data is being generated is unimaginable. We are talking of live streaming data, zeta bytes of data and real-time analysis of this data for maximum benefit. One of the most important characteristics of Big data is the variety of data in terms of the sources and the formats. Data can be either structured or unstructured, captured from multiple sources in text, audio or visual formats. Scholars and experts in the field of big data attribute its success and reach to its four characteristics, namely Volume, Velocity, Variety and Value. As the

complexity of data increases, the challenges are abound for the companies capturing and analyzing it. In fact, one of the biggest challenges for organizations today is understanding what needs to be captured, what needs to be analyzed and in what combination.

The data collected is normally very low on value density as most companies end up capturing terabytes of unwanted and unrelated data. So, organizations can do a much effective job on the analytics front, if they set out after gaining clarity on what needs to be done, where to get the data from, what needs to be filtered out, what needs to be analyzed, how and what insights are to be gained from the analysis.

Fig. 1:



The HR departments have been trying to apply analytics in areas with major issues or in areas of maximum impact. The different functions of people management and how analytics has made a difference are discussed here. Google, one of earliest companies to appreciate the impact of analytics in people management, employed big data analytics to revolutionize the working of the HR function in the organization. The people analytics team at Google reports directly to the Vice President, which speaks volumes of the importance attached to people analytics in the company. The basic concept is to replace individual opinions, feelings and intuitions by data and metrics. This is applicable for all the critical and not-so critical decisions of the company. Google's initiatives in different functions of people management are discussed along with the examples of other companies which are doing path-breaking work.

Companies across the world and especially in India, can adopt the framework shared and emulate the best practices of some of these pioneering companies. There are a large number of analytics tools available, which can be customized to suit the specific requirements of organizations.

The IBM and MIT survey emphasizes the growing importance of analytics, especially people/HR analytics. The survey notes that

- Analytics is a differentiator for top performers
- Data is not the biggest obstacle, but lack of understanding of analytics is
- Leaders are committed to make data add value

Data Analytics in HRM is here to stay, as most business and technology leaders have realized the phenomenal benefits it can accrue to the people

management function. The challenge lies in getting on to the path of Analytics early and in the most effective manner.

### **Opportunities and Challenges for HR Analytics**

A good number of companies have started applying analytics across different functions of human resource management. Starting from human resource planning to recruitment to employee engagement, organizations have been adapting their processes and systems to apply data analytics successfully. Organizations globally have been trying to build a data-driven or algorithm based decision-making system.

According to a Hay Group Study, the impact of data analytics on ROI can be as high as 10-12 percent in sales while it can be as high as 70-80 percent in service industry. The attrition rates can be reduced by 54 percent, by focusing on employee engagement and reducing hiring errors. Though there is a lot of buzz on HR or people or workforce analytics, the fact of the matter is that this field is still in its nascent stages in the first quarter of the 21<sup>st</sup> century.

### **Opportunities for HR Analytics**

Data Analytics has opened a world of opportunities for better talent management in organizations. What the HR could do well earlier, can now be done even better with the support of analytics. The biggest advantage however has been in terms of respect and recognition for HR, at par with the revenue generating functions like production and marketing. Analytics has given this impetus to the people management function.

### **Accurate Manpower Planning**

Manpower planning has become extremely challenging in a work environment ridden with volatility and uncertainty. The Gen-X and Gen-Y employees, being highly spirited, have lower levels of allegiance when compared to their predecessors. This is perhaps one of the biggest challenges that organizations today face in terms of talent management. MINACS (now part of Concentrix), a technology and outsourcing company, employs analytics for effective workforce planning. Google too, employs its in-house developed analytics tools for ensuring that its human resource planning and talent management functions run together to ensure smooth functioning of the organization growing a phenomenal rate. SAP, one of the key players in the

HR analytics market, offers SuccessFactors Workforce Planning, a tool that helps organizations plan their manpower requirements better.

### **Error-Free Hiring**

Google makes its hiring decisions based on an algorithm, which determines the candidates with the highest probability of success after hiring. Based on the insights provided by big data analytics, it has brought down the interview rounds radically to four. On the assessment front of analytics, they found that they have missed recruiting the right candidate only in 1.5 percent of the cases. Google also applied data analytics to ensure better diversity when recruiting and promoting. Another example in case is Xerox, which benefited greatly as its call center attrition rates reduced by over 20% using Big Data. Xerox, based on the insights, also reduced its recruitment errors and thereby the associated costs.

### **Superior Performance Management**

In today's corporate world where employee performance as an individual or as a team player, is of supreme importance, tracking performance and managing it is extremely critical. Analytics can add immense value to performance management and enhancement in an organization at multiple levels. McKinsey partner Sapience's software provides its clients insights on how their workers spend their time. The client gets information on the time spent in meetings, on conversations over the phone, on answering emails and on different things they do on an average day at work. This would help the employees be conscious on how they spend their time at work and thereby improve productivity. The performance differential of an exceptional technologist at Google is 300 times higher than that of an average one, as determined by their analytics. Inputs like this help in designing and executing an effective reward system which in turn helps enhance the employee performance.

### **Enhanced Employee Engagement**

Employee engagement has been one of the KRAs for today's HR departments across organizations. Low levels of engagement or rather disengagement, lead to low productivity and high absenteeism/turnover. Organizations can no longer be complacent and rely on the cursory annual survey to gauge the levels of employee engagement. Analytics has equipped organizations to track and monitor employee engagement levels on a real time basis,

leading to enhanced commitment and productivity. Organizations can design their own solutions or employ tools like TINYpulse and eNPS, which are available in the market. Employing intelligent tools helps measure *actual* engagement levels rather than *what the employees say to just please the management*.

### Intensive Leadership Management

According to the NHRDN-Deloitte Indian Human Capital Report - 2015-16, majority of the Indian companies, almost 90 percent of them face leadership crisis. Data Analytics can help identify the prospective leaders in the organization and develop them to take on bigger responsibilities in the future. On the other hand, analytics can also help in identifying the

essential competencies of a leader. Google, through its “project oxygen” does something similar, which has helped it identify that personalized one-on-one feedback and interest in the employee’s development is the top most characteristic of a successful leader.

### Perceived Challenges for HR Analytics

Though there are many multinational companies like Google, Deloitte and IBM which have done a lot of work and made tremendous progress, most SMEs, especially those in non-technology sector have a long way to go. The benefits are huge, the data is readily available, the technology is out there in the market, but still most companies haven’t yet ventured into the field of HR analytics. Why?

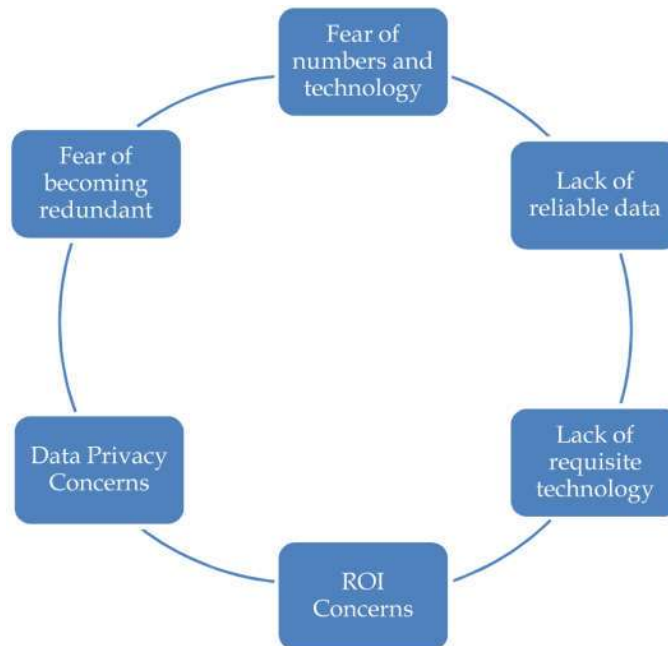


Fig. 2:

Typically, the HR departments in most organizations find themselves deluged by data. The fact that analytics talks about numbers, analysis and technology adds to their distress. They do not know where to start and what needs to be done. What data is important, what is not and which are the reliable sources of data? Do we need to invest a fortune in the technology and should we recruit more technologists? Will our people in the HR department be able to manage all this or would we need some rigorous training? At the end of the day, will all our efforts pay off? Is analytics really going to help us or will the entire investment go waste? So, even as some organizations are making big strides, there are so many of them still hesitating to take the all important first step. How can we get these organizations to get going?

- Focus on issue/impact, rather than data. “We should start with the issue at hand or the factor which is going to have a large impact on the business,” says an expert practitioner. Understand the problem and how it has to be approached; one cannot start with data because they would get lost in its enormity and complexity.
- Focus on the most severe problem or the biggest opportunity first. Take up the single most important problem at hand and try to look for solutions using analytics. Alternately, look for the opportunity that can add most value or bring about a major change in the way business is done.
- Drive action by stressing on the results/impact. Ensure that everyone in the function/department

is driven by the end-result impact of analytics application to a particular issue. Talking numbers and discussing specific cases can make a world of difference to non-experts or those in doubt.

- Collate and integrate data across departments HR. This will help in better assessment and alignment of talent decisions. For example, Ameriprise Financial Inc. worked on data integration for reducing new hire failure rates, managing poor performers and for better prediction of turnover.
- Ensure compatibility. Everyone connected with the application of Big data analytics should speak the same language. The HR executives, the top management, the data scientists, the analysts, all of them should work together for the best results.

### Conclusion

HR function has been undergoing transformation in this century owing to the foray of data analytics in people management functions. The HR function, which was earlier confined to the sidelines as a mere support function has emerged as a strategic contributor to business. The immense potential of HR as a value creator has been realized, thanks to Data Analytics. HR has to be willing to take the risks involved in adopting analytics, so as to reap the benefits. The HR fraternity should move out of its comfort zone, should be willing to embrace the world of numbers and technology. HR should be futuristic in its approach and should move beyond mere analysis and reporting, as it progresses towards predictive analytics. HR should hire the services of practitioners from the fields of statistics, programming, information technology and business strategy to successfully apply analytics to play the bigger role of strategic partner in organizations. HR Analytics, if it can be said so, has provided a new meaning and direction to the HR function.

Researchers can take up case studies of organizations which have successfully applied data analytics in HR and delivered the exceptional results.

Research can also be taken up on medium and small companies implementing HR analytics in India, to reconfirm the advantages that have accrued to them. The study can also include a discussion on the practical hurdles faced by companies. Companies employing data analytics for strategic advantage in HR, rather than using it as a simple reporting tool, have managed to reap the true benefits. The author intends to take up survey of Indian companies that have successfully adopted HR analytics to establish the validity of the points proposed in this paper. It is also proposed to do case studies on some of the Indian companies that have successfully applied HR analytics. Application of data analytics for people management is relatively new and its potential as a strategic tool is perhaps still untapped in many Indian companies. Further research in this field can encourage the companies to discover, accept and reap the benefits of Big Data analytics, especially for predicting talent related issues/changes in business.

### Bibliography

1. Mondore Scott, Douthitt Shane & Carson Marisa. Maximizing the Impact & Effectiveness of HR Analytics to Drive Business Outcomes, *People & Strategy*, 2011;34(2).
2. Boudreau J.W. & Ramstad, P.M. Strategic HRM Measurement in the 21<sup>st</sup> Century: From Justifying HR to Strategic Talent Leadership, In Marshall Goldsmith, Robert P. Gandossy and Mark S. Efron (Eds), *HRM in the 21<sup>st</sup> Century*, John Wiley. 2003.pp.79-90.
3. Lawler E.E. III, Levenson Alec & Boudreau John HR. Metrics and Analytics –Uses & Impacts; CEO Publication, May 2004.
4. Bersin Josh. Big Data in Human Resources: Talent Analytics (People Analytics) Comes of Age, 2013a. Retrieved from <http://www.forbes.com/sites/joshbersin/2013/02/17/bigdata-in-human-resources-talent-analytics-comes-of-age>.
5. Masenyane Molefe. From Data to Insights: HR Analytics in Organizations, Research project submitted to University of Pretoria. 2013.