

## **HR ANALYTICS: CHALLENGES AND PROSPECTS OF INDIAN IT SECTOR**

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### **Abstract**

Human Resource (HR) is monumental for any organization. Besides knowledge, it brings ability and technical skills, essential for sustainable-success of any organization. Gauging the quality, status and prospects of human capital has always remained a challenge for organizations. It has been traditionally, the HR assessment was carried manually, which involved a lot of subjectivity. However, with the advent of technological advancement, application of sophisticated data mining analytics technique to HR data has given a different shape to analytics known as HR-analytics. Contemporarily, HR-analytics is emerging as a novel way to first augment and later exploit the HR for organizational gains. So far, HR-analytics has been adopted by Western IT sector but off late is paving its way in the Indian IT sector too. Present paper provides a captious-analysis of the HR-analytics in Indian IT sector and attempts to explore its approach towards analytics' development and application. Corollary, HR-analytics in Indian IT sector has a vast-potential but inadequacies in HR systems, teams and people skills. This calls for need to have rational HR professionals for strategic decision-making and competitive advantage, as we believe creative and innovative minds can generate the best economies in the world. To ensure the presence of such talent in the organization, we need good assessment tool as well

**Keywords:** HR analytics, IT sector, MNC, Strategic decision-making,

**JEL Classification:** M15

## Introduction

Human resources are getting into the limelight with HR analytics. Before the advent of internet, wifi, etc. one of HR's primary aims was to collect and keep a record of employees' information (personal and professional) such as salary, performance reviews etc. in hand form. Moving with time and technological innovations, HR department's talent and recruitment strategy has come in transition, from intuition to data based decisions. This change in pattern of decision-making requires handling huge amount of data for better implementation of strategic decision for gaining competitive advantage. 1980's is a marking era for evolution of Human Resource (HR) Analytics with the Fitz-Enz's book, *How to Measure Human Resources Management*, which gave metrics for measuring employee's performance (Waxer. C, 2013). HR Analytics is known as a communication device which brings the employee's data altogether from different sources such as surveys, records of current condition for better predicting the future (Fitz-Enz & John, 2014). Retail, telecommunication, IT and healthcare sector have shown rapid growth in cloud based data and predictive analytics solutions. Currently, India is holding position among top ten big data analytics market in the world (NASSCOM, 2016). The market shows that it has huge growth potential. India is going to hold 32 percent share in the world market by 2025. (Big data analytics to reach \$16 billion industry by 2025: NASSCOM, 2016). The reports by TJ insite survey from timesjob.com across Industries shows that only 7% of companies in India using big data analytics to find job-fit employees but about 90% of those companies are in favour of data based decision rather than gut-feeling judgments (times jobs, 2015). HR analytical tools can forecast employee turnover rate for the next 3 months by analysing the operational insight given by data analytics. Henceforth, the future of human resource in India lies with the predictive analytical models. In the dynamic journey of voluminous big data and escalating growth and competition among business partners, predictive analytics can turn out to be the "Game Changer" (Forbes, 2018).

Indian IT sector has acknowledged the value of HR analytics generally for recruitment and selection strategy. More than 80% of these business firms declared that they have Full-bodied analytical process and structure in place (People Matters editorial team, 2015). Sixty-seven percent of US\$ 124-130 billion market appoints ten million workforce, makes India the world's largest sourcing destination for the information technology (IT) industry (IBEF, 2017). IBM using

data analyses for retaining the best talent and acquisition whereas TCS used big data analytics not only for talent management but also analysing its impact on overall business outcomes (TCS, White paper, 2014). Most of the organization invested on analytics only for metrics of headcount, payroll or salary and not for the data that fits together and linked to organizational performance (Higginbottom, 2014). Moving forward, there is a need for exploring the Indian IT sector in the field of HR analytics, that what are the prospects of HR analytics, the challenges and problems faced by them in implementing the Use of HR analytics and what benefits it brings.

### **Research Questions**

Big data analytics for human resource is less explored topic in research field. Nascent literature of analytics is available in Indian context. In report of NASSCOM Summit 2016, it has been stated that Human Resource Analytics is going to capture the market specifically the IT sector, Health sector etc. Therefore, the current researcher has tried to explore the prospects of HR analytics in Indian IT sector and the challenges they face while using it. This paper also aims to explain the benefits of using HR Analytics. The objective of this research paper is to help Indian IT sectors to make understand the present prospects of HR Analytics field. This current study also identified the challenges for analytics in HR. This paper deals in qualitative research and the data collected from research papers published in journals, articles, books have been collected and reviewed, interpreted, and conclusion have been drawn. The research questions, therefore, are:

- What prospects do Indian IT sector have with the use of HR Analytics in an organisation?
- While applying HR Analytics, what kind of challenges does an IT organisation face if any?
- How far the use of analytics by HR department is benefitting to an IT organization?

### **Prospects of HR Analytics in IT Sector**

HR analytics is nutrition for thought to HR professionals, specialists and scientists. The HR analytics is ‘the new normal’ for the early adopters’ human resource professionals. While experts stay aloof or want to have a second thought before they enter into the domain of data driven HR. Analytics done for human resource can develop best of team for winning the market. Adding upto, this one of the best examples “Billy Beane is the Oakland’s baseball coach who by using analytics and selecting players based on arduous statistical calculations of their performance, yield winning results. This approach of making a team led to make record of the longest winning streaks in major

league history” (Zettelmeyer, 2014) shows that the analyses for selecting best human for the company can make a company win in this dynamic-globalised world, opening a platform for HR analytics.

In 2012, the cloud based tools named “Kenexa”, SAP and Oracle with Tableau has been discovered by IBM for talent management to analyse the voluminous big data of human resource (Waxer, 2013). After so much of increasing demand for analyses of people and the increasing prospect for HR analytics, the acceptance level is low. Data highlights shocking reply by the HR managers, only 75% of 3300 HR managers said that using analytics is ‘important’ for strategic decision and only 8% of them consider their business ‘strong’ in this area (Global Human Capital Trends, 2015). Disturbingly, after the great elevation in innovation and growth of the big data market, this percentage response by HR practitioners shows that HR department is far behind in using analytical tools for competitive decision-making. Salesforce (NYSE: CRM) evaluates that analytics and Business Intelligence (BI) applications will upsurge their Total Addressable Market (TAM) by \$13 billion (Columbus, 2015). These estimates are not defining particularly about HR analytics but giving an idea of completely analytical market. Specifically, when it comes to IT sector, software market covers 18% of HR analytical market in which the company outsourced the analytical tools for data gathering and analysis, whereas presently only 10.9% of companies using advanced analytical solutions for HR process (Accenture survey, 2015). It shows that IT sector still have long road to travel for applying Big Data to their business. The human resources (HR) analytics journey look no advance than the good old recruitment process (Shinde & Misra (2017)). Analytics gaining importance all over the globe, so India need to think more intellectually to gain and sustain in the IT market. Wipro, Infosys, HCL and TCS are leading IT sector and trying their best to device analytics for Human Resource Capital.

Wipro Ltd. has started using different software for holding back talent and social media analytics for grabbing new skills, through cloud based HCM (Human Capital Management) software. The main factor which led need to adopt the latest technology and innovation for human resource is labor mobility (Wipro Annual Report, 2015). The transition of Wipro Ltd from cloud based oracle system to their own Wipro HR sprinter software for augmenting talent management, gives strategic insights for decision-making. This software shows trends of each employee by just a click, the data of employees in the system predict their behaviour as well. In real life, business

firms are not investing enough for developing HR analytics. HR should claim entitlement for HR analytics, mainly in a dedicated role. Managers use HR metrics for recruitment, selection and retention rather than seeing the overall performance of the Human Resource Department. As we know that recruitment involves lengthy process, it deals with lots of data about the employees. Hence, managers can use descriptive and predictive analytical tools for recruitment of employees and deciding about the salary. Recruitment efficiency will be improve up to 80%, if analytics is used (Mc. Kinsey survey, 2016). Infosys is no way behind in adopting the software called as my Nest HR Analytics and dashboard (Infosys Consulting Blog). HR analysis aided the organization in understanding its internal hiring as well as external hiring ratios. Infosys further adds that organizational success depends on employee's performance and it can be analysed by the use of analytical tool. HCL technologies is one-step ahead than these two companies have analytics tool. Semantic analysis is one of the tools used by HCL for investigating database of over 5 million candidates and internal employee's records, while Predictive Index is for hirers and recruiters to employ right person at the right place. It is also using talent transformational analytics and 17% demand is fulfilled (Singh. N, 2016). This paper explores that Indian IT industry is still on initial stage of acceptance and needed a sound structure for HR Analytics. Hence, Indian IT market have many prospects in terms of HR analytics to be explored.

The HR and big data analytics acceptance in industry is too relying on numerous variables such as individual, organizational and technological role in inducing its acceptance among HR managers in Indian organization [Table 1 (George. *et al.* 2016)].

**Table 1: Factors Affecting HR Analytics Acceptance** (George. *et al.* 2016)

<i>Individual Factors</i>	<i>Organizational Factors</i>
Analytical skills	Analytical culture
Performance expectancy	Facilitating conditions (Training & Resources)
Readiness to change	Social influence (Top management support and influence)
Understand Importance of analytics	Vision for using analytics
Voluntary use	Data factors (Availability of data, sharing of data)
Opportunities to use	-

With the above variables, technology plays very important role. IT sector of India has world's largest coverage, with almost all these above factors available but still there is a huge gap between the demand and supply of the Human Resource analytics. The business outcome is one crucial for any business for survival, which needs talent analytics. The research on competing talent analytics (Davenport, *et al.*, 2010) illustrates that leading company like Proctor and Gamble, Best Buy & Sysco uses sophisticated data of employees for analysis and getting valued talent for the company to achieve competitive success and practices analytics for refining methods of attracting, retaining talent and linking their employee data to business performance. Furthermore, the other author added that analytics does not affect only decision making but also performance outcome and viewed as competitive advantage, but focus of this study is that only technical literate and technological based manager can use analytics (Mathew J, 2010). HR leaders should not only emphasis on attrition rate, recruitment or giving rewards on past data but also recognize the prominence of return on investment (ROI) for every employees. Additional empirical analysis is required to crisscross this conceptual work about the association between these variables and its effect on adoption and use of analytics in HR field.

### **Challenges Faced by HR Managers in Implementing HR Analytics**

HR professionals usually adopt trusted and tried metrics, which is commonly used for making workforce strategy (CIPD Research Report, 2013). Home-based structure is required to give precise answer to problem, which exists in organisation and it also helps in overcoming irregularity and unpredictability in data itself (Boudreau and Jesuthasan, 2011). There are three major blocks in implementing HR analytics as mentioned below (CIPD, 2013):

- **Silos:** Structural barriers in the system of organisation that mainly hamper timely and efficient access of data termed as “Silos”. It is prompted not only because of structural barriers among HR but also among the other department, that hinders the exchange of data. The system silos are those relating to infrastructure for data analysis and issues such as systems unsuitability, safety-security, and IT skills issues.
- **Skills and Smarts:** One of the main factors for blocking the use of analytics is need of “skills” due to which organizations are not able to use HR analytics. HR department adopts analytics only when they can appoint new analytical talent and can produce high impact business focused

insights. HR Analytics can only move to the next level when human resources have numerical knowledge.

- **Suspicion and Skepticism:** Professional and cultural interferences, stops the analytical techniques from being rooted within HR. This happened due to preconceptions and perception of expertise between HR. Analytics can break behaviour of people into unit of measurement.

Wipro Ltd. labelled their challenges more passionately and deeply by explaining the above three barriers as follows (Wipro, 2015):

- Responsiveness to talent needs and execution of forward-looking talent strategy
- Complex employee policy
- Customized benefits
- Dynamic career plans
- Flexibility
- Collaboration/insights
- Social

Challenges in using analytics in Indian IT sector are many, which required their solutions. Cindy, (2012) mentioned:

- Investment is major issue for the HR leaders because new HR system is required for keeping pace with the advancement in technology. New metrics are constructed by HR leaders, for which new investment and time is required. Now analytics in HR is moving towards new trend. Not only recruitment, attrition and labor cost metrics is used but also, HR leader's measures employees' past performance and based on such pattern, future trend is explained.

- There is a huge gap between demand and supply of HR analyst. Hence, the cost is so high. Due to high demand, hiring analytical talent can charge around salaries of \$100,000 or more, and training of HR leaders around amount to \$5,000 per employee.

- Absence of confidence in HR experts for using statistical tools i.e. analytics. The report of Bersin and Associate shows, only six percent of HR teams thinks that they are "experts" in analytics for talent management whereas other 80% doubts that the data they have is not reliable for decision making.

- Quality of data and the challenge to tackle the outdated data available for the employees make them handicapped with inferior data. Hence, the technique of gathering data should be always a

first stage towards using analytics for better decision making.

- Another challenge of HR managers are overloaded data information, which leads to chaos among them to use for decision-making

Jacqueline Lee (2015) mentioned in her article that; data analysis is resource-intensive for IT, and many smaller companies simply do not have the infrastructure for Hadoop or analytical programs. Acute analysis of the IT industry clarifies; there is lack of analytical skilled Human resource. In addition, there is a gap between demand and supply of talent, which can use analytical tools for better performance. Though another research exhibits, sometime lack of qualified talent gives right analytical question such as; “*Which employees are in a danger of attrition and how to save them?*”(CGI Report, 2016).

The present study explains different dynamics of challenges faced in adopting HR Analytics. Therefore, there is demanding need of pragmatic research to get the actual depiction of challenges occurred in using analytics. The other important issue of HR leaders faced is with the dispute i.e. “buy or build”, whether to employ new talent or need of a training program for the existing one. This conceptual paper make it clear that factors such Legacy IT systems, HR policies and strategic barriers are less dominant in Indian IT industry.

### **Benefits of Using HR Analytics in Strategies**

“HR is very keen to take benefit of the competency to predict talent demand, gauge talent supply, and retain the employees who anticipate HR-related outcomes”, says Elizabeth Craig, a research fellow with Accenture Institute for High Performance (Trends Reshaping the Future of HR, 2014). Moving further, there is a living example named “Billy Beane”, the Oakland Athletics’ coach for baseball shows that analytics can earn winning results. He proved this in 2002 by selecting players based on arduous statistical assessments of their performance (Leigh Steinberg, 2015). This approach of selecting team based on analytics led his team to become one of the longest winning streak in league history. These examples shows that how far HR analytics is also beneficial for making strategies to gain competitive advantages.

Despite the fact, this paper explores the prospects and Challenges of Human Resource Analytics faced by the said sector; it also brings many benefits for the organization as whole and specifically

for Indian IT industry too. “HcACe” is human capital analytics used by TCS enables well-timed decisions, fact-based planned actions, and measures performance. Total cost of ownership (TCO) is reduced by full application of HR Analytics. It also helps in focusing on core and strategic functions. Moreover, TCS refined the benefits as follows (TCS, 2012):

- Pay roll can be managed by analysing the root cause and decreases payroll cost by reducing manual processing, check bounces etc.
- Diverse workforce is monitored efficiently. The system identify the dynamic features that increases employee output, boosting employee morale, attrition causal analysis and trends.
- Best talent is retained. Top performers are identified regarding job tenure, pay scale, performance rating, and past attrition rate.
- Effectiveness of training and development programs are investigated. It assesses efficiency of various internal and external training and programs to deal with skill gaps.
- This HR system helps in ensuring compliance with local, regional and country specific compliance requirements

Wipro Ltd. using HR analytics has increased capabilities for training, motivating and compensating employees, discovering new and exciting opportunities for organisation. It also gives planned vision to the HR leaders for making decision about employees who will be star performer and which one will leave organisation (Wipro, 2015). Almost all the IT companies use predictive Index (PI), which creates a communicative profile of the employee and provide an exact depiction of employee’s central energies and job preferences (Singh. N, 2016). Present study explains the benefits of using analytics for human resource department, which are common among all the IT companies for making decision (regarding attrition, recruitment, and compensation). The use of benefit of HR analytics can be extended by using correct metrics for decision regarding investment in employees training and development program. The training of employees contribute more to ROI (Return on investment) and then evaluating the overall business outcomes. The entire HR architecture is transiting ‘traditionally’ employing skilled labor to ‘modernly’ hiring human resources, which is improving ROI (return on investment). This transition shows increased market share of the company. Ultimately, not only Finance Department is taking part in increasing ROI, but now a days HR department also coming into the picture. Further research can be done on the

linkage between these two departments in context of ROI in relation to analytics.

## **Conclusion**

Human Resource Analytics is key element for changing HR leaders across all sectors. HR analytics shows trend for every employees going to leave the job or stay and track the performance of each employees. Recently, it is adopted by the IT sector for making better HR decisions. This research paper is conceptual in nature and based on secondary data sources such as research journals, magazines, newspapers, company reports on HR analytics. The analyses of given researches explores that Indian IT industry has just now awakened with the idea of adopting the big data analytics for better HR decisions. Indian IT sector (Wipro, Infosys, HCL etc.) is said to be at infancy stage unlike western business firms, for example, IBM, developed different kinds of softwares to record accomplishment of employees. The prospects and ambition among business leaders to improve Human Resource practice and business outcome through analytics is growing rapidly in India. The analysis of papers illustrates that HR analytics in IT sector has been used more for recruitment, retention, reducing attrition rather than showing effect of HR analytics on entire business outcome. There are requirement of developing new HR metrics for business decision-making by the Indian companies. Lack of innovative technology, demand-supply gap exists, huge cost, rigidity of culture pose notable hurdles for the Indian IT sector to device big data analytics for the people. In addition to these challenges, important one is lack of analytical talent accessible for HR analytics.

Although, laterally with barriers and challenges, analytics has carried many benefits for the Human Resource leaders for Indian IT firms. Analytically, the reports of Wipro, Infosys, and TCS etc. rooted with several aids as reduced attrition rate, retaining best talent, improves productivity, etc. The Indian IT industry, need new human capital metrics for calculation of ROI per employee. If new metrics are develop, it will help HR professionals to take decisions regarding appointing or retaining employees. However, HR managers of Indian companies are still taking decisions on gut feeling rather than on information. This shows that HR analytics remained only a buzzword than being actually explored and used. Henceforth, this research paper unlocks the route for empirical research to discover the present state of use and adoption of HR analytics in Indian IT companies.

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