CHAPTER – II

INTRODUCTION TO
HUMAN RESOURCE ANALYTICS
(HR ANALYTICS)

2.1: INTRODUCTION

Organizations today are competing for a better future and reshaping their image in the industries. Globalization has made it mandatory every company in every industry to be on the edge, as they are competing to be the top dog in the market in the present day. To be on the Zenith, every organization must try to occupy the high ground and the key lies in the attainment of competitive advantage to be the leader in the industry and having a self-determining assessment about tomorrow’s prospects and built proficiencies to exploit them. For attaining this sustainable competitive edge, organizations today must design their HR system linking with their overall corporate objectives and goals. No functional area of any firm can function without the assistance of its workforce assets. Subsequently the most vital assets (human assets) of organizations today inherently influence the general system of the business.

Organizations are made up of people; these people can make or break an organization. Every organization is striving to ascertain some new solutions on
how to persuade people to make the organization. It’s important not only finding the right people who can contribute positively to an organization, but also make them accomplish the essential competencies and motivating them to add importance continuously to the success of the organization. The function of the organization that takes care of managing people is called Human Resources Management. It fundamentally deals with employing the right people, developing their competencies as per the demands of the organization, compensating, utilizing and maintaining them to meet the desired organizational goals. People with diverse competencies and backgrounds must be managed effectively by the organization. To enable this, modern organizations are required to graft integrated talent management system.

Human Resource Management plays a critical role in any organization. Human resource management is a function of the organization specifically envisioned to capitalize on the employee’s performance in service of an organization’s strategic objectives. The prevailing economic set-up is forcing Human resource Managers to focus their attention on its workforce performance for generating returns for the business. But as global economic and political settings are changing. It has started to bother the corporate leaders, and hence their attention has turned to the various devices that can nurture success in uncertain times. In today’s fast emergent economy, competition has intensified among organizations. To achieve strong competitive edge, organizations are obligated to align their HR strategy with their complete business strategy. No functional
area of an organization can function without the help of human resources. Hence human resources integrally affect the overall strategy formulation of the organization. Humans are the greatest means an organization can have. Thus, human resource management is that portion of the organization which is concerned with the “people” phase (DeCenzo and Robbins, 1996). Every organization is basically comprised of its people. And ensuring their productivity remains profitable to the organization is the work of the HRM.

As the economic set-up keeps on fluctuating due to globalization, Human resource department also needs to adapt to this new variation. Hence, retaining top talents is the crucial concern for the HR today. Better employee engagement and retaining strategies are the requirements of the era. For instance, HR today is mainly engrossed in the execution of strategies in the form of cutting back and restructuring through outplacing employee performance related pay policies, reducing wellbeing care overheads and retraining most skilled employees. Hence, even in the increasingly competitive environment today, forming HR practices that build employee commitment usually help expand organization’s responsiveness. The success of the organization rest on its people. Human resources help the organizations to manage and last in the midst of fast growing and the fast changing socio-economic setting by exploiting business opportunity with the minimum risk and challenges. Hence humans are remarkably important and provide a strategic advantage in the fiercely competitive market.
HR as an instrument for competitive advantage aids every organization in the quantification of the challenges like staffing & recruitment issue, succession planning, attrition, compensation, performance management, retention problem, training and development, HR effectiveness measurements and much more which are being faced by HR in the present situation. Being a perennial problem ever, F.W.Taylor has suggested in his book “Principles of Scientific Management” how to improve the economic efficiency, especially the labor productivity with the application of scientific methods. “Time and motion study”, recommends the using of standardized tools and putting into practice a standardized work method that synthesizes the workflow in the organization hence prominently improving the productivity of the employees wherever it is applied. Thus, Taylorism has built the foundation to renovate HRM today. Owing to the rapid economic variations and globalization, Human Resource department is repeatedly facing trials and are in constant predicament towards decision making. Every passing day each challenge is becoming more intense.

The high attrition rate is one of the most volatile factors in any organization. If turnover rate can be predicted accurately then it will aid in better workforce planning. This will aid the HR managers to develop better compensation and benefits packages hence reducing employee turnover. Since each variable of HR is interrelated, knowing the cause and effect of one problem can help formulate some solutions for all the others.

Human Resource Management deals with the management and claiming of human resources. Its main function is to increase capacity and efficiency of its
employees intended to expand worker execution capabilities in organizations keeping in mind the employer's key targets. HR is essentially concerned with those who oversee the economy for individuals inside organizations, centering on strategies which are focused on frameworks of the policies of the company. HRM as a division is mostly associated with those that undertake several activities including a member of staff profits design, recruitment, preparing and development, and execution of appraisal of every employee. HR also concerns itself with organizational transformation and industrial relations, by balancing the organizational practices with requirements arising from collective bargaining and from governmental laws.

Armstrong (2006) well-defined the term human resource management as the strategic and most coherent ploy to the management of an organization’s most cherished possessions – the people employed there, that contribute individually and collectively to the achievement of its objectives. HR is predominantly concerned with how people are managed inside the organizations that ultimately focuses on the framing of policies and systems (Collings & Wood, 2009). In the organizations, the HR departments and units are usually liable for several activities, including recruitment, training and development, performance appraisal, and rewarding of the employees (e.g., managing pay and benefits systems) (Paauwe & Boon, 2009).
The strategic impact of unique proficiency of the employees has been appreciated after the study was made by McKinsey & Co and found that the most vital and imperative for the corporate business in the next 20 years will be talent: smart, sophisticated businesspeople who are technologically literate, globally astute, and operationally agile. And the demand for talent will increase and the supply of it will go down. The war for the shortage of talent between companies is the biggest human resources concern (Makela et al., 2010). The organizations that are interested in achieving its strategic goals must adopt unique approaches for attracting, developing and retention of talented employees (Huselid et al., 2005). Thus, talent is the core competency of the organization and its management will enable organizations to be competitive.

2.2. **HR ANALYTICS BACKGROUND:**

HR has simple prime functions that can be enriched by applying processes in analytics. The functions majorly include acquiring the talent, optimization, and developing the personnel of the firm. HR analytics aid to dig into the major glitches and apprehensions surrounding these requirements and making use of the analytical workflow, it guides and enables the managers to respond to the problem-related questions and gain awareness from the information that comprises statistics at hand then makes significant decisions and make fitting arrangements.
Human Resources Analytical tool is the latest IT technology which has provided HR executives, HR professionals and line managers with the powerful metrics, alerts, and reports empowering them to apprehend how workforce dynamics are affecting the individual, departments and take apt measures. Managers and front-line professionals receive critical information on staffing, recruitment, workforce development, workforce cost, and diversity at levels of detail such as by geography, job category, division, and pay grade, etc. This HR analytics or workforce analytics has given the organizations the power to make workforce decisions by reducing the costs, identifying the revenue streams, mitigate risks, and execute effective business strategies. HR analytics empowers the HR managers with accurate predictive analytics which determines the future, mainly for the organizations seeking a more proactive role in driving business strategy. HR Analytics enables the HR Managers to make human capital decisions that impact the business results. Hence, it enables the HR to be more engaged in the formulation of the corporate strategy.

For the past century, Human Resource Management has renovated significantly. It has developed from an operational discipline and headed for a more strategic discipline. The term has gained more popularity over the period of time and the Strategic Human Resource Management (SHRM) exemplifies this. The data-driven tactic that reveals HR analytics is in line with this development. By utilizing HR analytics HR professionals
does not have to bank upon gut feeling anymore. Analytics empowers the HR professionals to make data-driven verdicts. Likewise, analytics also helps to assess the efficiency of HR policies and different interventions.

![Fig 1.1: HR decisions no longer based on Gut feeling](source: AnalyticsinHR.com)

Just as the marketing and financial analytics have been transformed its fields, HR analytics is revolutionizing HR, enabling them to:

- Make improved evidence-based decisions by using the data related to its workforce
- Produce a business state of affairs for HR involvements
- Check the value of these contributions
- Change from an operational partner to a tactical, or even strategic partner

Presently, the many of the HR departments’ emphases on reporting employee data. But this does not suffice in the present-day data-driven economy. Keeping the records is often not sufficient to add to a strategic value. Eric Van Vulpan (2016) quoted Carly
Fiorina that the main purpose of analytics is to turn data into more informed facts and information into insight thus applying to HR as well. Using of Analytics gives the HR more empowerment to grow into more decision-making on a strategic level.

![Data-Driven Decision Making in HR](image)

**Fig 1.2: Data-Driven Decision in HR**

*Source: AnalyticsinHR.com*

### 2.3 DEFINITIONS OF HR ANALYTICS:

Technopedia (2016) illuminates HR Analytics as an area in the arena of analytics that states the application of analytical processes to the human resource department of an organization in the anticipation of refining the better employee performance and therefore getting an improved return on investment.

Further, it also defines HR Analytics as not just dealing with data gathering on
the employees’ efficiency but also offers an insight into each progression by gathering data and then using it to create relevant decisions about how to improve these processes.

The blog in Technopedia (2016) explains HR analytics as correlate the business data and people related data, which enables to establish the essential connections later on. The crucial aspect of HR analytics is to conclusively establish the impact of HR department in the organization as a whole. It generally establishes a cause-and-effect relationship between what HR does and business outcomes - and then frame strategies which are centered on that information.

The blogger of Tech Target (2012) is also of the opinion that the main objective of human resources analytics is to help an organization with insights for successfully managing its workforces so that corporate goals can be reached promptly and competently. The ultimate task of human resources analytics is to mainly ascertain what kind of data that should be captured and how those data should be utilized to model and foresee capabilities so that the organization acquires an optimal return on investment (ROI) on its human capital.
Also as defined in the article of Cornerstones (2017) HR analytics, also well-known as talent or people analytics, is the usage of sizable mining of numerous information which is stored in the organization and business analytics practices to talent data. Analytics measures the performance and efficiencies that matter to HR only. Few of the examples includes: phase to fill a job requisition, numeral people that are trained, number of people proficient skills, yearly turnover rate, expected attrition for future, projected applicants to have in the line which is based on anticipated attrition, sources providing the top candidates, agreement reporting, reporting in variety.

According to an article featured in Human resources MBA, HR analytics establishes the fundamental connection between the activities claimed by HR department and the business effects that arise out from this motion.

Another author Peter Reiley (2016) is of the opinion that HRA mainly concentrated on the forecasting and building the links that are relating to HR activities (and/or workforce data) and organizational outcomes. Further, he describes that the part of HR analytics is predominantly refining business decisions and driving action. Thus it can be said that HRA is a method of straightening out people-related business hitches, mostly by using data drawn from multiple fronts, by collecting and presenting data through the dashboards. HR analytics is the mode by which multiple data sources mainly about its
people and business are applied for a business problem-solving or risk-mitigation process.

Edward Houghton (2017) explains HR Analytics as the practical usage of people associated data in analytical processes to decrypt business-related problems. HR analytics uses together people-data, which has been composed of HR systems (e.g. payroll, absence management) and the business data (e.g. operations performance data). HR analytics thus empowers the HR practitioners and the employers to increase imperative visions into their personnel, HR policies and practices, specifically focusing on its human capital element of the workforce, and ultimately providing additional evidence-based decision making. HR analytics predominantly supports the HR professionals to have an improved understanding of its workforce in spawning significance for its organization. It offers a framework of the quantitative and qualitative forms of HR data that embraces the cause and effect relationships between data sets.

Heuvel & Bondarouk, (2016) has defined HR analytics as the organized identification and quantification of the people drivers of corporate conclusions. It is basically a data-driven method headed for HR. Eric VanVulpen (16th May 2016) in the blog states that Human Resource analytics is about analyzing an organizations’ people linked problems with help of data mining. Vulpen further explains that HR departments have been collecting enormous amounts of HR
data in the organization which remains unused. But as soon as organizations start to use these data and analyze the people related problems by utilizing this data, they are involved in HR analytics. In order to gain a competitive edge over its competitors, strategic planning has become more complex for business units and subsequently for HR function as well. By adopting HR Analytics to guide the decisions making and strategic development processes, new opportunities have arrived which are applicable to all core HR processes such as talent acquisition, attrition, risk management, succession planning, retention, compensation planning, and capacity planning. By using HR analytics organizations have taken the guesswork out of the employee management by means of leveraging analytics to improve their methods of attracting and retaining talents, connecting their employee database to business performance which has helped them in differentiating themselves from their competitors.
2.4: HR ANALYTICS: EMERGENCE AND DEVELOPMENT

Human Resource department seizes mammoth amounts of data about the employees like the performance of the employees, turnover rate, job mobility, training and development, compensation, staffing and much more. These data remain motionless in various HR systems and are rarely used for any strategic decisions. But with the emergence of the latest IT technology viz. HR Analytics these unused data can be utilized for making a fact-based strategic decision.

Fig 1.3: Core Data-Driven Analytics
Quantifying the HR raw data into insightful data is the need of the hour. HR analytics helps to quantify these raw data into valuable information which the HR managers utilize to make a strategic fact-based decision. Humans are well-thought-out as the capital once their values have been identified. HR analytics helps to discover out the ROI on HR projects which supports the Senior HR management to give worth to the human resources.

HR analytics aids the HR managers to examine and predict the forthcoming effect that affects the organizational performance. HR analytics play a progressively imperative role in addressing strategic human capital challenges by permitting the HR professionals to make human capital decisions that impact business results. HR Analytics also helps in:

- Mining compensation data
- Spotting skills availability data
- Setting benchmarking data
- Modeling tools for organization definition and job structure
- Post-hire assessment tool.

Human Resource Analytics is a communication device that fetches the data together from different sources to tint a cohesive and actionable picture of present-day conditions and likely futures. It also gives an improved and more
precise understanding of how numerous issues impact the workforce and organizational performance.

In the report of Price Waterhouse Coopers (PwC) (2014), states that the HR analytics has renovated the world of HR. The HR department that uses the analytics go forward into a strategic partner and achieves sustainable competitive advantage for their organization.

Also as denoted by the article in Manthan (n.d.) HR analytics integrates and correlates disparate data from various sources across the organization to provide relevant, timely and actionable insight to improve the employee performance and the ROI. The use of this analytics aids the organization to be more informational leading to take more relevant decisions timely and more appropriately giving a sustainable competitive edge over its competitors.

The Oracle white paper (2011) explains that through the use of HR analytics organizations today can drive their financial return on human capital investments and improve the value of their workforce to the organizational performance. It also clarifies how HR analytics increases the analytical insight which aligns the core workforce business process with the overall business goals and thus ensuring organizations make the right decisions today for the future.
2.5: EVOLUTION:

The rich history of HR analytics can be traced back to the late 1900’s where Fredrick W. Taylor analyzed the job performance of the employees and laid down the capacity of performance to do the job in the factory in his Scientific Management studies. In early 1960’s, decision support system (DSS) began as computer-supported models generated to assist with the decision-making system (Bersin, 2012). Then in the late ‘70s and early ‘80s with the introduction of reporting and basic metric capabilities, came the widespread use of Human Resources Management Systems (HRMS) and the benchmarking prospect which has been introduced by the Saratoga Institute. Standard practices for calculating and reporting common metrics – like turnover, headcount, EEO representations - began to take hold. The utilization of process engrossed metrics such as time to fill, organization-oriented metrics including HR staff employee headcount, and financial based metrics such as cost per hire led to efforts in the ‘90s to use balanced scorecards to benefit HR leaders which will reflect goals and measure, progress and results. (Joanne Bintliff-Ritchie, 2011)
Fig 1.4: TIMELINE OF HR ANALYTICS EVOLUTION

Source: Bersin & Associates 2012
2.6: CONCEPTUAL BACKGROUND:

For improving the worth, it is crucial for HR to be able to progress from ‘tracking’ (metrics & reporting) to the ‘analytics’ (impact analyses for organizational improvement). In achieving this, HR should change to analytical competencies in the three areas viz. efficiency, effectiveness, and impact (Lawler et al, 2004).

- **EFFICIENCY**: These mostly assess the HR accomplishments with a strong financial emphasis. It is the capacity of whether a certain goal (i.e. recruitment, training) has been attained with the means and time investment that are to be claimed. It is mostly expense-related data such as the cost of salaries, training, recruitment, absences, etc. that are addressed here. These are important data and hence they have to be well-organized. Unfortunately, they do not add significant value to HR work.

- **EFFECTIVENESS**: The aim of this measurement is to check if HR programs and activities do what they should be doing rather, do they have an effect at the level of skills, motivation, and empowerment of the employees. Evaluating training results or the quality of newly recruited employees etc. are typical effectiveness measurements. HR analytics clearly adds more value to this type of measurements but cannot yet indicate what the impact is on the proper functioning of the organization.
IMPACT: The highest step is impact measurement. The field of true HR analytics is examining whether HR investments, HR activities or HR processes have a tangible impact on the organization. This comprises of examining whether changes in skills, motivation, and empowerment as a result of the implemented HR programs and activities lead to changes in operational and financial performance. By linking the databases of various positions (HR, finance, operations, sales, and marketing) correlations and causal nexuses are made that provides an important insight into strategic decision-making.

Fig 1.5: Metrics for Organizational Performance
Table 2.1 Analytical Competencies measurement of HR

Source: HR Analytics Insight blog by iNostrix

In the past HR may have had hunches and theories as to why some of the HR programmes had worked whereas others did not, and made judgments based on just these hunches or theories. The new technology viz, HR Analytics now give HR professionals the ability to follow these instincts and validate them with data providing statistical evidence that leads to insights that support change, re-direct the HR budget/effort, and convince the senior leadership team of the need for change.
2.7: **CONCLUSION:**

Management cannot exist without measurement. Currently, HR is expected to have a strategic role in planning and defining the significance of human capital in businesses. HR has occupied the role of forecasting through Analytics and offers a futuristic outlook for organizations today. HR Analytics focuses on using metrics that can be defined in an HR context, comprising the HR processes and analyzes the value in business terms. HR Analytics plays a pivotal role in any context of HR, whether it be during a strategic acquisition procedure or the firm’s decision to acquire into a different line of business or the traditional method of recruitment or strategy design for a performance management for employees or a survey to recognize employee expectations or insight of the company culture, any of which that directly or indirectly enhances the worth to the business aims of the company. For gaining competitive advantage, people data quantification, human capital metrics and scrutiny of these data related to people are critical expertise in HR Analytics. Hence HR Analytics not only provide organizations the insight into the people related problems but also helps the HR professionals in the formulation of the better enhanced corporate strategy to gain a competitive advantage over its competitors.

Thus, this study attempts to find whether HR analytics enhances the performance of the organization as a whole. It will also attempt to determine how HR analytics empowers the HR managers in Indian companies to make
fact-based decisions supported by statistical evidence in justifying their investments. It will also try to determine the linkage between HR analytics and Compensation strategy formulation.