Workforce Analytics: Need of the Modern Organisations

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Abstract--- *With the growth in industry and complexities in the corporate jobs the volume of data has increased multi-folds. Over last 20 years the companies have realized the importance of data and its interpretation in effective management of business operations. Almost all organizations someway or other are increasingly adopting the analytics in day to day activities of the organization. The scope of analytics is not confined to marketing and finance rather now the data available for HR to report has also increased and gained importance. Fields like Talent acquisition, management, performance and compensation etc have started utilizing the analytics for the better results, and however most of the companies have yet to even realize the need for the use of analytics in the field of HR. According to a report published most companies have not understood the value from their analytics investments, with only 12% of organizations currently using talent data to effectively influence business decisions and 70% of organizations expect to increase the resources which they dedicate to talent analytics in the recent times. The aim of this paper is to understand the rise of HR analytics over the last few years. This paper focuses on the role of stakeholders involved in HR, who have developed and positioned HR analytics as a necessary solution to existing and upcoming challenges*

Keywords--- *Work Force Analytics, HR Analytics, Talent Management, Performance and Compensation.*

I. INTRODUCTION

The term "HR analytics" is trying to identify and establish its meaning with the stakeholders. In the year 2016, HR analytics as been defined by Van den Heuvel & Bondarouk, is "the systematic identification and quantification of the people drivers of business outcomes, with the purpose to make better decisions".

Precisely HR analytics can be stated as analyzing human resource related data in a systematic and critical manner to make better business decisions. Human Resource analytics is new gaining its importance day by day and will be taken as one of the important field in the area of human resource management (HRM).

Despite all the importance and increasing acceptability, academicians' role is still very limited only to scrutinizing the HRA phenomenon (van den Heuvel, 2016; van den Heuvel &Bondarouk, 2016).

With increase in the technology advancements and growing industry demand it is evident from the data received from research that only 15% of business leaders have changed a decision in the past year as a result of HR data. The available data also proves that the there is a not a big increase in the gross profit margins and drive talent outcomes by improving analytic impact.

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The changing world of business is causing HR to evolve

According to a report published by Cornell University, Centre for Advanced HR Studies- Just 13% respondents felt they had the necessary technology and systems in place which can facilitate HR analytics whereas according to IBM study the organizations that do not currently have workforce analytics applications, 2/3rd plan to develop and deploy such capabilities within the next 1 to 5 year. In recent past several studies have established the fact that the two main areas which attract the organization attention are "Engaging the workforce"& "developing leaders" and remain top priorities for organizations. The other areas which remain in the other priority list are "performance management", "workforce planning/talent analytics" and "training and development" (Global Assessment Trend Report).

II. LITERATURE REVIEW

A historical overview on the evolution of HR Analytics

Area of human resorce management started evolving in 1950s which is evident from the contribution in research done by Peter Drucker.

But HRM got its importance in the mid 1980s, which is quite recent (Beer, 2015). HR analytics has picked up prominence recently however the presence depends on the ideas of HR field which have been existing for long.

The term HRA picked its importance in the years 2000 onwards, and attracted the researchers, academicians for work and research. The concept of HRA was given importance like the other ideas balanced score card a tool used in performance management.

The rise of HRA has been recent and through research it is important to investigate that why there is sudden rise in the populatry of HR analytics?.

The purpose of management fashion research is to understand why some management concepts become popular over others (Madsen & Stenheim, 2013). A management concept as described by Benders and Verlaar (2003, p. 757), a "more or less coherent, prescriptive vision on (aspects of) organization design."

In HR, there are many examples of management concepts, e.g. HR Scorecard HR Transformation Performance Management (Smither & London, 2009) etc.

However, not all new HR management concepts end up as HR fashions only and do not prevail for long in the interest of academicians and researchers. The management fashions are "management concepts that relatively speedily gain large shares in the public management discourse." Jung and Kieser (2012, p. 329)

Several studies have been carried out by various researchers of India and abroad, to find out the various factors that lead to employee satisfaction. There is a growing body of literature regarding the effect of good HR practices on the functioning and success of industries. As per Beeline (2012) report, the workflow and productivity of workforce can be enhanced more efficiently and effectively if we can measure the human dimension of a firm in a better way. The human element can be quantified and understood as the essence of workforce analytics.

Robinson (2012) stated that workforce Analytics is a combination of methodology and software that applies mathematical models to worker-related data, allowing leaders to optimize Human Resource Management.

Robinson (2012) explored that potential benefits of Workforce Analytics includes shorten recruiting cycles, avoidance of costly mistakes to largest P&L items, Improved retentions and Better training ROI. As per the Aberdeen's research, organizations that utilize dashboards and analytics and combine attendance and time data into its scheduling system are achieving huge gain in business metrics which includes labor cost reduction and customer satisfaction.

Workforce analytics is a new corporate mindset. It can encourage a fresh, animated psychology and culture of excellence among the workforce. Human intervention and intuition are also mandatory for successful workforce analytics to understand and extract the intelligence from the data to better inform business decisions (Beeline, 2012).

Marrs (2012) states even if there are lot of benefits of workforce analytics, the software and science driving analytics is still complex. Though a HR practitioner's intention may be good, it can be dangerous if he/she is inexperienced in handling the analytics tools. The evolution of HRM has mainly been affected by the development of new technologies, which have changed the different HR processes and the way the work is managed and done in organizations (Stone et al., 2015). Aral et al. (2012) present strong evidence for a positive correlation between financial performance and the use of HR Analytics in their empirical study. Fink (2017) suggests that an end-to-end HR Analytics work flow starts with asking the right question and ends with measuring the result to determine whether the action was effective.

Waber (2015) stresses, that 'you do need buy-in from leadership' (p. 3) when implementing HR Analytics.

Rouse (2012) stated that workforce analytics is a combination of methodology and software that applies statistical models to worker related data, allowing enterprise leaders to optimize human resource management. It is possible to make general and specific hiring decisions, identify the necessity for new positions, analyze and predict current and future technological needs and improve recruiting methods with the use of workforce analytics.

Bailey (1993) stated that in case of programmed or structured jobs, contribution of even a highly skilled and talented workforce will be limited. Because, in these cases, employees knows their job very clearly.So there is no scope to user their inner ability to design new and better way of performing the job. HR practices can influence firm performance through provisions of structures like Quality circles, job rotation and cross functional structures.

Gartner (2012) explored workforce analytics as an advanced set of data analysis tools and metrics for comprehensive workforce performance measurement and improvement. It analyzes recruitment, staffing, training and development, personnel, and compensation and benefits, as well as standard ratios that consist of time to fill, cost per hire, accession rate, retention rate, add rate, replacement rate, time to start and offer acceptance rate. Robinson (2012) stated that workforce Analytics is a combination of methodology and software that applies mathematical models to worker-related data, allowing leaders to optimize Human Resource Management.

Hota & Ghosh (2013), In the paper "Workforce Analytics Approach: An Emerging trend of Workforce Management "the author explains the workforce analytics as the new corporate mindset. Also reveals that adopting

non aligned analytics strategy is increasing, which results the future of the firms in doldrums. Having an end to end range of analytics capabilities supported by an integrated analytics strategy, organizations are advised to enlarge, or cut short, the distance between themselves and competitors to their own competitive advantage.

Marten et.al (2013), in their research paper on A Framework for Business Analytics in Performance Management, the authors suggested that with the adequate use of data and analytical methods business dynamics can be controlled. These are called Performance Analytics.

The process of applying big data in HR has been given different names, including HR Analytics, People Analytics, Talent Analytics, and Workforce Analytics. Just as with the name, no uniform definition of HR Analytics exists (Marler – Boudreau, 2017).

Bersin (2013) points out that the availability of HR data is not an issue since organizations have captured educational history, demographic and performance information, and many other employee factors since around three decades. Harris et al. (2011) stress the importance of having consistent, accurate, integrated, relevant and accessible employee data available in order to track employee competencies and reveal patterns.

According to a study by Kaur and Fink (2017), the most used technologies for HR Analytics include R, Tableau, Python, SPSS and Excel. The study confirms that HRIS are not sufficient enough to conduct statistical analysis and data visualization.

III. OBJECTIVES OF THE STUDY

1. To assess the function of workforce Analytics in Human Resource Department.

2. To identify the benefits of Workforce Analytics for smooth HR functions in an organization

3. To assess how workforce Analytics will reduce employee attrition in the organization.

IV. METHODOLOGY

The survey of literature is based on the inclusion of research journal papers, books, working papers, bulletin and printed reports. E basis of consulting reports and printed available literature it was found that there is a strong relationship between employee outcome and successful use of HR Analytics in organizations. The re-view was conducted using academic databases accessed through EBSCO host and Google Scholar using the key-words HR Analytics, Human Resource Analytics, People Analytics, Talent Analytics, and Workforce Analytics.

A total of 21 articles were referred to the literature review, which were - with two exceptions - all published between the years 2011-2018. Most of the articles were published after 2010. All referenced articles were published in management research journals, the research revealed that there are many more consulting reports, white papers and blogs dealing with the idea of HR Analytics. Hence, the topic under review does not seem to be of great importance for the management researchers. This results in a predominance of non-empirical articles. The majority of the referenced articles in this literature review are of non-quantitative empirical nature, only few articles involve testing of theoretically derived hypotheses.

In order to ensure a better understanding of the topic under review, the literature review also covers the background of HR Analytics and elaborates the development and theoretical assumptions of a more data-driven approach to decision-making in HR. This is followed by an elaboration of existing definitions of HR Analytics. Further, case studies are illustrated in order to show how widespread the practice of HR Analytics in organizations already is. Finally, the major findings of the topic under review are discussed and summarized

Current Business Needs

With the change in the current scenario the various business are emerging and businesses need to react to these needs on urgent basis. The organizations need to have fast response time which means that the organization either need to quickly scale up or scale down their operations as the case may be. The organization's ability to rapidly ramp up or down plays a crucial role.

The next important aspect which organizations needs is flexibility to align with the markets situations which essentially means that how companies adjust to the need of the markets to sustain themselves in the business.

The essence of any business success remains on the three aspects first being Operational effectiveness, second working on the actionable insights and correct predictive modeling. This can be explained with the fact that any organization who is unable to get operational efficiency through existing workforce, work on the internal data with more precision and able to take care of the forecasting which can make the organization cater to the upcoming seen and unforeseen challenges.

Reduced operation cost continues to gain corporate attraction as a one single factor which has time and gain proved beneficial for them.

It requires no support to claim those organizations who have worked for reducing the operation cost have excelled in the markets and sustained their existence for long. Under the operation cost reduction two aspects have to be looked into are resource and process optimization.

Seamlessly integrating the processes and systems should be another focus area for organizations to gain the competitive advantage. As established as a fact that no competitive advantage is permanent and organizations need to keep evolving the new advantages the reliability on these factors increase their popularity with the strategists.

The organization finally need to be employee centric which will in turn keep the employees satisfied and motivated. The satisfied and motivated employees are dream of any company and can get the organizations a fortune.

Figure 1, represents the shift of Traditional HR towards the new evolving HR. From an integrated approach of policy planning, businesses partnering with focus on the administrative and services transforming to the new modern approach with a comprehensive inclusion of analytics and insights visible through the data available.
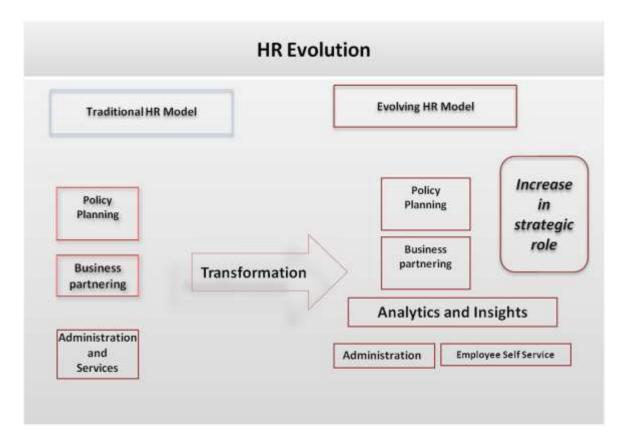
Fig. 1: HR Evolution (self Created)

The human resource stakeholders need to revisit questions such as what is the average time to respond to a query, how many queries require multiple responses, delay in incentive calculations etc. These aspects are data based and require lot of emphasis as delay can cause severe loses in terms of attrition, loss of opportunity etc.

From the operational efficiency to operational cost the answers are looked for improving the scenario. Insights from the organizational inputs like what is the current diversity index and how it can be useful for the growth?

The prediction of data is required with respect to what are the characteristics of a successful employee, which employees are at risk also if new structure can help the organization. The correct prediction can help organizations in development and growth.

Similarly the questions related to plan, recruit, enable, grow, retain the employees and uncovering multiple challenges.

There are multiple systems which exist in the organizations which are not interacting with each other. In the widely used Reporting tools implemented by HR departments, organizations are unable to make use of the available technology; HR leads believe that it still takes almost a week to turn around a new report. The problem is that there is lots of data but it is not clean and integrated for effective decision making.

Keeping in mind the current trends only 27% respondents agreed to the situation that they had a strong team of analytical talent who could execute HR analytics projects and also 1/5th respondents strongly agreed that they trusted the reliability and accuracy of their organizational data - CAHRS

Despite the promise of greater efficiency and reduced departmental operational costs, the adoption of workforce analytic applications remains elusive. Only 33% of respondents indicated that they have such a solution in place – IBM survey

It is important to mention here that according to Global Assessment Trends the emerging economies want to use mobile technology to assess candidates, therefore highlighting the fact that companies are moving toward the use of technology and tools in much assertive manner which can be useful for them. There are examples of various approaches which are currently being used in the organisation supporting the argument that there is trend towards using the HR analytics for organization growth.

The Need	Approaches Used
Tackling attrition rates	Using predictive modeling and internal targeting
Sales force restructuring	People Placement solution for evaluating and placing sales people
Process automation	Improving data transfer, error traceability improves
Attrition Management	Process development for analyzing risk indicators and predicting attrition
Leadership Programs	Aligning through dashboards for Success Profiling and Prediction
Legacy systems require too much manual intervention	Redesigning and automation of processes for data transfer, operational reporting and error tracking

HR's new role through digitalization

Almost 2/3rd of business leaders comply to the fact that to be more competitive the organizations have to be more digitally strong to embracing transformational changed but the fact cannot be overlooked that the strategies are either not developed or small to be supporting the transformation.

Most of the leaders emphasize that chief people officers need to adopt more and more digitization for better employee experience but majority leader feel unprepared to manage the said demand.

Workforce Analytics

HR department always on look out for proficient people in the field of analytics and scarcity of resources in the field especially in workforce analytics is evident. The workforce analytics needs the people who have domain knowledge and are capable of working on data for analysis and other tools that HR professionals would need which can gradually leading to improvement in decisions. It is becoming all the more, more important that the

professionals analyze and scan the data appropriately for correct estimation on ROI on talent management, budgetary control over the workforce and reporting for the performance management. We need to train our managers on workforce analytics with better understanding of the data, tools and their interpretation. They need to understand how workforce analytics can contribute to the organization growth and better achievement of targets. Data analytics is supporting the change in the methods how we manage knowledge workers and drive business results. HR professionals are being taken as the mediators with accountability to connect the two together.

Workplace changing scenarios

Everywhere in the world the workplace continues to evolve with great pace. Increase in social communication, Virtual workplaces, remote workers, are few of the factors contributing to it. There are lot of researches supporting and estimating further globalization of business, increased worker mobility, increase in workplace mobility, and increased cultural integration on social and corporate levels. There will likewise be a move on the talent retention where HR will be playing an important role is in charge of human-capital investigation for leadership decision making.

The Future of Hiring

Workforce management needs more vigilant planning and organizations need to look into the requirements more frequently. The organization will have to be more reactive to maintain the talent pool as now the hiring challenges are more and on the growing trend. HR will continue to be an integral partner in achieving the success despite all the uncertainty existing for HR professionals. HR professionals will play an important role in making all the business decisions. The development in the workforce analytics will lead to moderation. The stakeholders are confident that with the help of workforce analytics the talent management will improve and will in return benefit the future workforce.

V. CONCLUSION

In this paper we have provided a needed critical examination of the HRA phenomenon, a concept that in particular, has been originated with the development of technology over the past decade, We all are living in the virtual world and this development has happened in just 10 years.

HR has been affected by these tectonic shifts as well, cloud technologies, advances in machine learning, faster processing allowed to store and analyze vast amount of data from within and outside of organizations.

This triggered the development of predictive analytics in HR allowing to explain and predict things related to people like How new HR policies will affect employee morale and by corollary performance? What skill sets will make it successful in the future?

Big data analysis contributed significantly to psychological assessment technology by providing researchers with larger samples of psychometric data than they could ever get hold of before and connecting these data with organizational and individual performance.

Technology has also made advanced HR management tools more accessible to small and medium-sized companies.

Although the HR researchers were skeptical that the current wave of interest in HRA may not live long. Rasmussen and Ulrich (2015) argue that it is crucial that HRA is grounded in real business challenges. Therefore, the HR function needs be involved with the initial phase and provide the justification for gathering data and conducting analyses. If not done then, are chances of high risk that organizations end up with large amounts of data which is not needed, and not used to solve actual organizational problems.

Furthermore, the role of social media in the popularization of HRA can not be ignored, evident also and technologically infused management concepts such as HRA and Big Data is increasingly happening online.

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