



A study human resource analytics

Ganji Suresh Kumar¹, S Padmanaban²

¹ Assistant Professor, Department of Management Studies, CMR Technical Campus, UGC, Affiliated to JNTUH, Hyderabad, Telangana, India

² Assistant Professor, Department of Business Administration, Sri Subramaniya Swamy Government Arts College (SSSGAC), Tiruttani, Tamil Nadu, India

Abstract

The role of human resource management in organizational performance has been an area of interest for decades. There is an ongoing change in the field with the advent of digitalization and analytics. HR professionals have to face the new realities and be acquainted with the rapid developments for competitive edge. Therefore, this paper extends an understanding on the aspect of analytics with respect to the field of Human resource management. The research draws the reader's attention towards the necessity of HRA, along with the benefits. Also, the reasons for the sluggish growth of HRA has been discussed which are further backed with recommendations. The insight not just provides managerial implications for restructuring of organizations but also serves as a basis for future research and development.

Keywords: Human resource analytics, people analytics, workforce analytics

Introduction

The world is transforming and there is no denying that digitalization has been a major catalyst in this transformation. This change can be pictured as an interplay between technologies and data resulting in revised practices. With the advent of digitization companies and businesses have completely changed how they operate which was a customary shock initially, now being seen as an imperative part for survival. It has become substantial that businesses stay up to date with this development. McAfee *et al.* (2012) ^[19] speculated that big data has the potential to revolutionize management due to its impact on the decision-making process by giving a clearer picture of firms operation and performance measurement mechanisms. Large volumes of data are being generated every minute from numerous sources and made available in digital media ecosystems so that it can be exploited and ensured a competitive advantage (Pappas *et al.* 2018) ^[21]. The objective behind business analytics is to leverage value from data (Acito and Khatri 2014) ^[1], to solve problems and create value in business organizations (Chen *et al.* 2012) ^[10]. Analytics has benefited organizations in areas such as sales (Jayaram *et al.*, 2015) ^[15], operations (Hazen *et al.*, 2016), logistics (Wang *et al.*, 2016) ^[25], supply chain (Souza, 2014) ^[24] and finance (Cao *et al.*, 2015) ^[9]. These aspects of business processes have been studied extensively and the revelation of impressive benefits that data driven insights can bring has been widely recognized. The massive incorporation is happening due to the data being statistically valid and useful at the same time. However, the department of HR has lagged even with a good deal of data on employees and to establish a good connection between data and better business performance. Analytics with respect to HR would mean systematic identification and quantification of the people drivers of business outcomes with the purpose of making better decisions (Heuvel and Bondarouk, 2017) ^[14]. The idea of human resource analytics is still blossoming as an important

aspect and it is yet to reach its true potential. The sluggish growth of HRA is attributed to the tendency of organizations to exhibit similar characteristics which is called isomorphism. The relevance and contribution of analytics in human resources is exigent as workforce is not just a cost to an organization rather an asset. Deciphering the complex existence of the workforce and how it can be used effectively has been added to the list of objectives by every organization. Analytics provide a predictive insight to bolster scenarios forecasting which was earlier missing from the traditional practice of Human Resource. It adds value to the HR practices of recruitment, training and development, succession planning, retention, engagement, compensation and benefits. But most importantly the nature and purpose of HR Analytics has to be clear prior to its incorporation in the organization. If there are any irregularities in clearly defining the purpose for which HRA is being incorporated it is likely that no value will be derived. Organizations maintain employee data pertaining to productivity, performance, workforce headcount, engagement, training hours, absenteeism and cost of labor so as to strategize its practices for higher return on investment. This process of maintaining records is time consuming and often doesn't result in anything beneficial due to the drawbacks that organizations face. Therefore, the aim of the paper is to list down the benefits and the reasons for sluggish incorporation of Human resource analytics.

Organizational result of adoption of HRA

Human resource analytics facilitates organizations with descriptive, predictive and perspective analysis. Description analysis to begin with involves using data for visualization, reports, drilling down, dashboards, turnover rates, cost per hire and absence rates. This analysis tries to establish a link with the help of present and historical patterns which is initiated for improvements (Reddy 2017) ^[22]. The predictive analysis under HRA involves data mining and modeling

using current and data from the past to predict the future. Judicious use of HR analytics aid leaders in predicting and facilitating solutions for complex situations such as identification of individuals who are most likely to resign. This can be possible with the help of psychographic homogeneous segmentation of employees based on their personality, lifestyle, social status, activities of interests and attitudes. The prescriptive analytics uses optimization algorithm to predict outcomes and provide decision options, showing alternative impacts (Reddy, 2017) ^[22]. An example of analysis is sentiment analysis which is conducted to assess the mood of an individual and detect any red flags for dismissal (Nocker and Sena 2009). Analytics assists organizations in studying and tracking patterns to identify gaps in order to be rectified. HRA helps organizations establish real time evaluations so that prompt decisions can be made, rather than being dependent on yearly performance evaluations. This real time evaluation locates the red flags with much precision. Ghasemaghaei *et al.* (2018) ^[12] found a significant positive relationship between data analytics competency and firms decision making resulting in drastic improvement. Sparrow *et al.* (2015) cited the incorporation of HRA by Tesco helped them understand its customers to better understand its workforce, McDonalds also understood the interaction of staff demographics, management behavior and employee attitude to optimize restraint performance. HRA facilitates talent management decisions by identifying the position in need of talent and matching it with a pool of talent followed by actions such as monitoring and retention (Minbaeva and Vardi, 2019). Talent management with the help of analytics can churn high returns on investments in talent. Also it provides a roadmap for automated hiring, holding and firing employees. Karmanska (2020) ^[16] reported HRA to improve workforce planning, recruitment of talent thereby increasing the number of competent personnel which in turn reduces the personnel cost. Also it has made the entire process automated. Blue chip giants such Google uses HRA to predict employee performance using their applicant database. Sysco uses HRA to create causal links between work climate surveys, delivery driver employee satisfaction, customer loyalty and higher revenue. HRA helps in describing the outcomes simply by analyzing the historic data. It gives organizations a privilege to access employee data to decipher employees at a newer level using different permutations and combinations.

Explanation for sluggish adoption of HR analytics

With the upsurge in the popularity of HR Analytics there has been a parallel uprise of skepticism. The incorporation and application of HR Analytics makes it important to know about the potential hurdles that organizations can encounter. First impediment to being with is inadequate IT capabilities which is essential in adoption and implementation of analytics, an addition to this plight is issues related to funding in order to initiate a project. There appears to be a disconnect between evidence and decision to adopt, Lawler *et al.* 2004 ^[17] and Lawler and Boudreau 2015 ^[18] report the result of a survey conducted on over 100 fortune 500 companies which suggested that only less than a third of these companies use HRA to link HRM processes and people and business impact. Another cause of concern is whether HR individuals are equipped to ask the right questions to generate information and draw insightful results. It is practically impossible to use analytics without

having quality data that is complete, accurate, structured, reliable, timely and of value. Lack of quality data and proper data are major issues affecting the implementation of HRA (Anderson 2017). According to Fitz-enz and Mattox (2014) ^[11] approximately 75% of HR departments do not have practical base metrics. However, measuring people using metrics cannot always ensure fruitful results given how uniquely different and complex an individual is to decipher. Another hurdle that organizations face is lack of analytical competency amongst the HR personnel. Being able to use descriptive and inferential statistics and draw descriptive, predictive and prescriptive insights is a must. However, HR professionals come from different educational backgrounds and therefore lack an analytical maturity. Also, implementation of HR analytics is challenging as managers encounter technological stress with short, dynamic technological cycles, perishable information and rapidly changing learning environment which demands managers to learn and unlearn interfaces (Baruch and Vardi, 2016; Bondarouk and Brewster, 2016; Vrontis *et al.*, 2021) ^[5, 8, 26]. Many HR personnels fail to have exposure to the information technology systems and often misuse such technology due to their unexperienced and unstructured behavior. Moreover, information of employees and customers can be misused to jeopardize the privacy and security of an organization. Even though HR analytics is quintessential for the HR profession the inadequacy of product and services to meet the needs of HR professionals and organizations still remain.

Conclusion and recommendations for incorporation

Adoption is the choice of exploiting innovation, being the most appropriate action at disposal. Potential adopters might have a positive attitude towards innovation but there is always an air of uncertainty with respect to the innovation. Facilitation of innovation on trial or limited basis not just helps the adoption but has been reported (Roger 2003) ^[23] to increase the rate of adoption. Further recommendations from someone's personal experience can improve adoption of innovation. Factors such as quantitative self- efficacy, trialability, quantitative training, analytics awareness and organizational support are some of the factors that ensure smooth adoption of HR analytics. At personal level the adoption is determined by the individual's attitude towards analytics followed by technology and quantitative self- efficacy. Also, social influence and trialability tends to play a role in the adoption of HR Analytics. Bersin (2013d) ^[7] suggests HR professionals can involve statisticians for analytical expertise. Agarwal and Raj (2022) ^[2] studied adoption of human resource analytics in IT sector found that self-efficacy, social influence, tool availability, data availability, fear appeals, effort expectancy, and performance expectancy, have an impact on the level of adoption. These variables were also reported to have a positive correlation with level of adoption. Gender also plays a part in the adoption of HR analytics. Amongst both the genders females are lagging behind in terms of adoption. Since female engagement in the field of HR is high, low analytics adoption can be explained by their limited belief that traditionally male occupations are not unsuitable due to their lack of aptitude to master essential skills. Setting aside the role of gender individuals lacking analytical abilities can impede the uptake of analytics. Research competency is also a prerequisite of any professional HR. The competencies

include data analyses, data presentation, root cause analysis, research design and survey design and quantitative data collection and analysis. Angrave *et al.* (2016) ^[3] HR Analytics should facilitate experimentation to identify the reason for performance improvement and quantify the return on investment that such efforts may provide. Therefore, adopters, researchers, academicians, institutions, organizations and business can consider the following with due diligence. The paper contributes to the literature as it presents the benefits of HR analytics. It also helps HR practitioners to understand the meaning of HR analytics and its dynamics. The mentioned literature in the paper serves as a basis for further research in organization as it broadens the perspective of HR professionals.

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