Using technology in a novel way to enhance organizational performance using HR analytics

[1*]P. Prejith, [2]S. Praveen Kumar

[1*]Research Scholar, [2]Dean,
Department of Management Studies,
Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu - 600126, India.

Abstract: **The degree to which business and HR strategies are integrated will determine an organization's ability to succeed in a market that is competitive and has transitional social and political conditions. People, organizations, and technology all contribute their special organizational capabilities when working together to produce business results. Since almost all businesses now provide technology-based and web-based applications for universal access to HR services. The incorporation of data analytics technologies, which is bringing analytical thinking into organizational structures, is causing human resource management to evolve quickly. Business executives today are putting more of an emphasis on training high-performing employees. The promise of HR analytics is improved business value and performance through data-driven decision making, initiatives supported by evidence, and the prioritization of the effects of HR investments. Predictive decision-making can boost organizational performance for businesses that use HR analytics to manage their workforce more effectively. The use of technology in HR has led to the adoption of HR analytics. The use of analytics is also influenced by the organization's capacity to change with emerging trends. In a number of different ways, each of these elements benefits the organization's overall performance. The purpose of this study is to investigate how an HR analytics framework can assist organizations in enhancing both employee and organizational performance. This article looks into the decision-making tools provided by analytics to enhance organizational performance.**

Keywords*:* Human Resource, HR Analytics, Organizational Capabilities, Organizational Performance.

I. INTRODUCTION

To organize, analyze, and make sense of the huge amount of data that modern societies are producing, the discipline of analytics was born at the confluence of engineering, computer science, decision-making, and quantitative techniques [1]. It has been argued that analytics is a "must have" ability for professionals in the human resources industry, a means of generating value from personnel, and a plan to expand the strategic influence of the HR department [2]. The administration of HR-related data is vital to the running of every organization. However, the development of HR analytics has been exceedingly slow. In contrast to the 48% of respondents who said they would be doing so in two years, 230 CEOs in a Harvard Business Review analytics study suggest a startling rate of anticipated progress: 15% of respondents said they use "predictive analytics based on HR data and data from other sources within or outside the firm." While a global research by Tata Consultancy Services indicated that only 5% of big-data investments were made in human resources, a global IBM poll of more than 1,700 CEOs found that 71% of them acknowledged human capital as a significant source of competitive advantage. HR analytics uses analytical techniques in conjunction with people data to inform company strategy and increase efficiency in addition to concentrating on investigating and boosting human capital components. The concept of the application of data and analytics in management is receiving increased attention from academics and industry experts as they attempt to comprehend how data may be transformed into insightful knowledge that enhances organizational performance [3].

II. BIG DATA AND HR ANALYTICS

Instilling and maintaining an analytics culture is the first step in developing HR Analytics competency. Big data is being used for decision-making in sales, marketing, and other areas, and HR has the chance to make a difference. Depending on their area of business, organizations often collect data that is subsequently processed to provide information that may be utilized for a variety of purposes. Any type of data that is too complex or large for standard data processing techniques is referred to as big data. Among the challenges include analysis, capture, curation, search, sharing, storage, transport, visualization, and information privacy. Big Data has a tremendous impact on the duties, goals, and pursuits of HR professionals as well as the contribution of their job to the organization. Big data is information that the organization has obtained using a range of techniques [4]. Internal surveys conducted by larger organizations or even companies that specialize in research and data collection could give it. The data is subsequently entered into the HR department's HRIS and made available for strategic planning by HR and the company following analysis.

An information technology-enabled HR method that uses statistical, illustrative, and descriptive analysis to determine the business effect of data on organizational performance, human capital, and external economic benchmarks [5]. Human resource managers can use data analysis technology to excite, engage, and retain current and potential employees by using analytics. About 1,200 HR professionals participated in a recent KPMG 2019 survey, and the results show that 70% of HR executives agree that workforce transformation is necessary.

III. TECHNOLOGY USE IN HRM

Information technology (IT) has advanced quickly in recent years, which has had an impact on how businesses operate and how support activities must operate. In response to globalization and the "growing demands and complexity of the quickly changing environment," human resource management has significantly changed in the past few decades to a more technology administration [6].

The digitization of human resource management brings to light the reality that robotics, automation, and digitalization all have a big impact on how the labor market changes. The typical functionality of workers in many different professions is changing as a result of new technologies. In business operations like human resource management, digital tools are used [7]. By enhancing communication and cutting expenses, digitalization is a tool that enhances productivity, efficiency, and effectiveness for businesses [8]. Digital technologies are employed in many HR operations, most notably those that handle massive volumes of data (big data), computer-assisted learning, the use of artificial intelligence in personnel selection and evaluation, the management of employee feedback online, and a number of other procedures. Intelligent systems are a completely new class of tools that can assure a tailored approach to creating leaders, screening applicants, and employing the right people, as well as suggesting the best training, identifying fraud attempts, raising employee stress levels, and other organizational concerns. Software that uses artificial intelligence can address almost all of the problems HR managers' face, from choosing candidates to determining an employee's emotional state [9]. Software that uses artificial intelligence emphasize as playing a crucial role in the application of information technology in HR analytics, is only briefly covered in a few articles [10].

IV. ORGANIZATIONAL CAPABILITY

Both the organization and the individual must have excellent organizational qualities to provide the best business results. A company is dependent on its capabilities and resources. The development of data capacities has been substantially facilitated by contemporary technology. Big data plays a significant role in the go-to-market strategies of the majority of firms; consider what the majority of sales and marketing teams are doing. After all, choosing based on evidence is typically far safer than choosing based on gut feeling. Despite the fact that HR Analytics is a relatively young discipline, the HR division is comparable. For progressive companies looking to gain a competitive edge, people analytics is proving to be vital.

HR strategists see a promising future for HR analytics, but firms are having difficulty implementing it. One of the most important capability gaps in modern HR practice is the underdevelopment of the skills needed for HR analytics [11]. Only 35% of respondents to a global survey by Deloitte of more than 3,300 business and HR leaders from 106 countries claimed that HR analytics was "under active development" in their organization, and only 8.44% said that their firms had a strong HR analytics team in place [12]. The majority of companies, including large multinationals, are unsure of the direction that HR analytics will go in the future.

Businesses with a lot of administrative duties frequently utilize web-based applications to keep track of their daily operations. Once more, businesses with intricate hiring, career management or performance management procedures pick to use technology solutions to finish their tasks faster and more efficiently. The extent to which HRM services utilize technology also significantly depends on the size of the firm. The size of the organization, the range of authority, the number of departments, and the organizational structure are all important considerations when deciding how analytics will be applied.

V. ORGANIZATIONAL PERFORMANCE

The use of HR analytics is a result of the usage of technology in HR. The organization's ability to adapt to changing trends has an impact on how analytics are used **Fig. 1**. Each of these components enhances the functioning of the organization in various ways.HR analytics have an impact on or have a different impact on organizational performance. HR analytics uses analytical techniques in conjunction with people data to inform company strategy and increase efficiency in addition to concentrating on investigating and boosting human capital components.

The HR analytics team at Google has developed an evidence-based strategy to enhance its recruitment and selection procedures by identifying a number of high performance indicators that could predict a candidate's chance of success. This was accomplished by gathering and analyzing candidate and staff data utilizing cutting-edge HR technology. Despite the growth of HR analytics research and the large number of case studies claiming that HR analytics helps businesses improve their performance, research addressing how and to what degree HR analytics effects and influences organizational performance is still inadequate [13]. The gathering and informatization of high-quality worker data through HR analytics, which yields critical organizational insights, simultaneously helps the development of organizational evidence [14]. Businesses will continue to use HR analytics as a discipline [15]. The objective of employing HR analytics is to get a competitive edge in the market, and the process is simple.

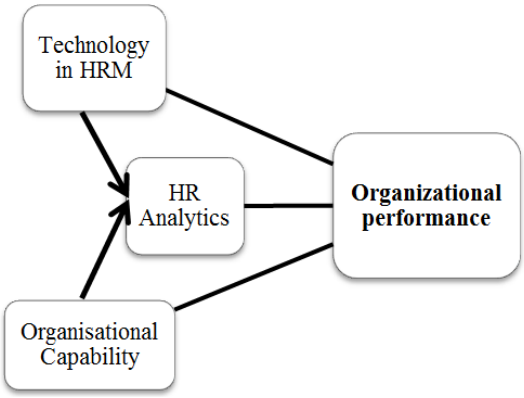

Figure 1: Frame work to improve Organizational performance

VI. CHALLENGES ASSOCIATED WITH HR ANALYTICS

Lack of HR Analytics Competency

When the HR department is unable to use the data at their disposal to the company's advantage, there is a capacity gap [16]. Because they lack analytical skills, HR managers and professionals are unable to analyze the HR data at their disposal in-depth

enough to make judgments that will benefit the company. Due to the difficulty for HR professionals and managers to conduct statistical analysis using employee data, some academics, including [17], recommend that analytics be transferred out of HR departments to line managers until these departments become competent to run analytics. The lack of appropriate skills and competency is one of the organizational problems hindering the use and application of HR analytics in organizations.

Poor Data and Tools Management

The HR professional needs accurate HR data from both inside and outside the company if they want to describe, explain, forecast, and optimize performance. It is necessary to comprehend the context in which the data were gathered in order to employ the proper data for the right analysis [18]. Finding the right data and finding out how to get it have been issues for managers and HR professionals. Accessibility to analytics tools or technologies has also been an issue [19]. Access to relevant data and tools as well as their availability for the construction of information has become crucial in a time when both have grown increasingly difficult to obtain. Again, high-quality, trustworthy data must be available and accessible for analysis if desired analytics results are to be realized [20].

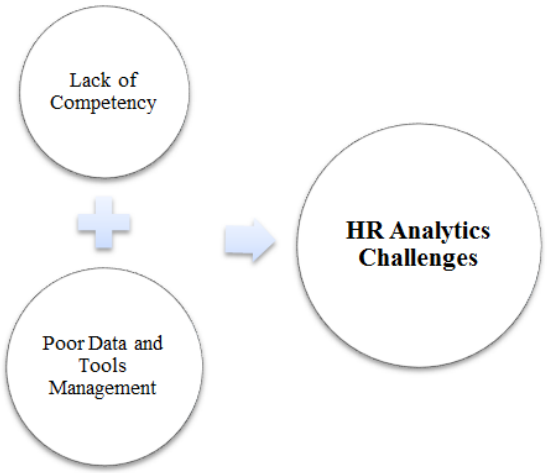

Figure 2: Challenges of HR Analytics

VII. CONCLUSION

A recent area of study in the field of human resource management is HR analytics. The ability to make decisions is crucial to every organization. A comprehensive inquiry and a critical evaluation of the past were necessary before making any decisions. HR analytics is a method for enhancing the effectiveness of decision-making in businesses that involves people. Recently, especially since 2010, there has been a significant growth in interest in HR analytics. The first stage in creating HR Analytics competence is to instill and strengthen an analytics culture. Sales, marketing, and other departments are using big data to inform their decisions, and HR has a chance to influence this. When it first appeared, HR Analytics shook up the world and revolutionized the HR division as well as other sectors of the economy. It is still achieving its full potential, surmounting challenges, and leaving its impact on the business world. Despite these obstacles, HR Analytics appears to have a bright future because more businesses are now recognizing its advantages. The main force behind the development of HR analytics was thought to be technology. This is hardly surprising given the historical background given in the earlier sections of the article: HR analytics developed from the "HRM and Technology" study stream, and their linkages are clear. The study's conclusion labels how technology, HR analytics, and organizational capabilities will be used to achieve organizational performance.

REFERENCES

1. M. Mortensen, N. Doherty and S. Robinson, “Operational research from taylorism to terabytes: a research agenda for the analytics age”, European Journal of Operational Research, 241: 3, pp. 583–595, 2015.
2. CIPD, “Talent Analytics and Big Data – The Challenge for HR”, London: Chartered Institute for Personnel and Development, 2013.
3. R. Chierici, A. Mazzucchelli, A. Garcia-Perez and D. Vrontis, “Transforming big data into knowledge: the role of knowledge management practice”, Management Decision, Vol. 57 No. 8, pp. 1902-1922, 2018, https://doi.org/10.1108/MD-07-2018-0834.
4. A. J. Du Plessis (Ed), “Human resource management and employment relations in SA: contemporary theory and practice”, Juta and Company, Cape Town, South Africa, 2015.
5. J. Marler and J. Boudreau, “An evidence-based review of HR Analytics”, The International Journal of Human Resource Management, 28(1), pp.3-26, 2016.
6. A. Kidron, S. Tzafrir, I. Meshulam, and R. D. Iverson, “Internal integration within human resource management subsystems.” Journal of Managerial Psychology, 28(6), pp. 699-719, 2013.
7. A. Z. Federova, Digitalization of the Human Resource Management, Russian Companies Case, 2019.
8. J. Indira, “Digitalisation of Human Resource Management: A Changing Role in Digital Transformation”, UGC Care Listed Journal, pp. 156-157, 2020.
9. A. Berzinya, “Artificial Intelligence in human resources: Key innovation trends”, 2018. Retrieved from https://bigdata366 madesimple.com/artificial-intelligence-in-human-resources-key-innovation-trends/.
10. D. McIver, M. Lengnick-Hall, and C. Lengnick-Hall, “A strategic approach to workforce analytics: Integrating science and agility”, Business Horizons, 61(3), pp. 397–407, 2018.

11. K. D. Carlson and M. Kavanagh, "HR metrics and workforce analytics", in M. J. Kavanagh, M. Thite and R.D. Johnson, (Eds), Human Resource Information Systems: Basics Applications and Future Directions, 2nd ed., Chapter 6, Sage, Thousand Oaks, CA, pp. 150-174, 2012.
12. Deloitte, "Global human capital trends 2015, leading in the new world of work", Deloitte University Press, 2015.
13. J. H. Marler and J.W. Boudreau, "An evidence-based review of HR analytics", International Journal of Human Resource Management, Routledge, Vol. 28 No. 1, pp. 3-26, 2017, https://doi.org/10.1080/09585192.2016.1244699.
14. M.A. Huselid, "The science and practice of workforce analytics: introduction to the HRM special issue", Human Resource Management, Vol. 57 No. 3, pp. 679-684, 2018, https://doi.org/10.1002/hrm.21916.
15. M. Molefe, From data to insights: HR analytics in organisations, 2013.
16. E. Fiocco, E, R analytics at work: Exploring diffusion of innovation within a Swedish Based MNC. Thesis: University of Gothenburg,2017.
17. T. Rasmussen, and D. Ulrich, "Learning from practice: how HR analytics avoids being a Management fad", Organizational Dynamics, 44 (3), 236-242, 2015.
18. D. Angrave, A. Charlwood, I. Kirkpatrick, M. Lawrence and M. Stuart, "HR and Analytics: why HR is set to fail the big data challenge", Human Resource Management Journal, 26 (1), 1-11, 2016.
19. N. Chahtalkhi, What Challenges does HR face when implementing HR analytics and what actions have been taken to solve these challenges? Thesis, University of Twente, 2016.
20. T. H. Davenport, J. Harris, and J. Shapiro, "Competing on talent analytics". Harvard Business Review, 88 (10), 52-58, 2010.