

HR Analytics: Transforming Human Resource Management

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Abstract

The digital transformation in HR can be seen as related to people analytics, artificial intelligence, and cloud computing concepts. The advancement has led organizations to capture employee data for strategic decision-making. The evolution of metrics to big data in Human Resource Management is through HR analytics. HR analytics has completely transformed the way HRM is carried out in organizations. This research aims to unfold and provide insights into HR analytics' role in transforming Human Resource Management through a conceptual approach. For this purpose, this study considers secondary data from databases such as Wiley Online Library, Emerald Insights, Inder Science Publishers, and Sage Publication. The paper silhouettes the pros and cons of HR analytics adoption and implementation and talks about the transformation HR analytics has done in management. This study uncovers the scarcity of research on HR analytics in the non-western context. HR analytics has the vast unexplored potential to transform Human Resource Management completely. The practical and efficient way to use HR analytics to improve employees and management is yet to be discovered. This paper provides ethical recommendations for the implementation of HR analytics in organizations. The managerial implications for the firms and institutions are a thorough understanding of how HR analytics influences the working of HRM.

Keywords- HR analytics, Workforce Analytics, Talent analytics, People analytics, Human Resource Management

Introduction

Employees are the most vital resource of an organization as they possess the potential, skills, and knowledge required to achieve the goals and objectives of an organization and have a competitive advantage. The greater the number of employees in an organization, the harder it becomes for management to direct their energies in the same direction. Hence, managing these becomes the most crucial task for the administration. Bondarouk & Ruël, 2009 (p.507) defines e-HRM as an umbrella term covering all possible integration mechanisms and

contents between HRM and Information Technologies aiming at creating value within and across organizations for targeted employees and management. The significant effect of digitalization of HRM has enhanced the firm performance (Zhou et al., 2020). The incapability of existing e-HRM software to provide analytical insights due to the inefficiency and effectiveness in data collection followed by inappropriate data quality, the incapacities and lack of knowledge of analytics by human resource act as barriers in adopting data analytics in HRM (Shet et al., 2021). McIver et al., (2018) considers strategic HRM as one of the salient building blocks for developing agile workforce analytics, workforce analytics capability, and workforce analytics vision, among others. The supporting role is well played by technology in the evolution from EDP to HRIS to e-HR to HR analytics (Kim et al., 2020). Technology offers the potential to store, analyze and interpret a vast amount of data. The advancement of technology has made it easier for organizations to manage big data. As per Blackburn et al., (2017) big data analytics can affect the time ahead of HRM.

The discipline of analytics offers the potential for understanding human resource phenomena. The interaction between HR analytics and HR technology (antecedent) facilitates evidence-based management, indirectly contributing to organizational performance (McCartney & Fu, 2022). HR analytics adds value to the HRM domain and offers effective decision-making and better performance (Ulrich & Dulebohn, 2015). HR analytics is an opportunity to upraise HRM for its strategic position in the organization (Marler & Boudreau, 2016). Through competitive and enterprise analytics, organizations can improve their strategic execution (Levenson, 2017). Samson & Bhanugopan, (2022) supports the positive connection between organizational performance and strategic performance measurement. This further secures the statement supporting decision-making determining the extent to which strategic human capital analytics improves corporate and market performance (Samson & Bhanugopan, 2022). People analytics and insider econometrics aids in exploring the strategic HRM field as both deal with intra-firm people data to explore the value of the investment in human resources (Larsson & Edwards,

2021). Given the vast unexplored potential of HR analytics, this study aims to provide insights about the transforming HRM practices through HR analytics.

Methodology

The research is a comprehensive literature analysis of HRM practices and HR analytics. For this purpose, secondary data was used. Online databases were Emerald Insights, SAGE Publications, Wiley Online Library, Inder Science Publishers, etc. This paper follows a conceptual approach for discovering the transformation in HRM practices through HR analytics. The study also provides suggestions for ethical recommendations for implementing HR analytics in organizations. Critically assessing the pros and cons of HR analytics adoption and implementation, a total of six sections this study is divided into. The paper covers the introduction of HRM, technology, big data, and HR analytics in first section. The literature review on HR analytics and HRM is stated in the second section. The third section discusses the methodology and data sources. The third section unlocks the result part of the study covering the transformation in HRM practices (recruitment and selection, training and development, performance appraisal and retention) through HR analytics. The fourth section has critically analyzed the benefits and challenges of implementing HR analytics and the ethical recommendations for implementing HR analytics in organizations. Finally, the conclusion is covered, providing the future scope of the study and its contribution.

Results

HR analytics performs a strategic role in the organization and has the potential to change the functioning of HR departments. Kappelman et al., (2018) identified analytics as the most prominent IT investment area. However, the adoption rate of HR analytics still suffers (Shet et al., 2021). Providing prospects in business decision-making, HR analytics is favored by most banking organizations, enhancing organizations' productivity and efficiency. Consequently, achieving data-driven results and long-term sustainability would be through the factors identified in HR practices (Nagpal & Mishra, 2021). Among the different human resource practices and functions, employee

recruitment and selection, training, talent management, and employee engagement have gained the scholar's attention. The following are the Human Resource Practices which have been transformed through HR analytics.

Recruitment and selection

Keeping in mind the value of employees, recruitment and selection is one of the most crucial HR practices for the organization. The traditional recruiting process doesn't fit the progressive organization in the competitive environment anymore. From defining candidate success profiles, conducting root cause of attrition, job profiling, forecasting workforce requirements, source mapping, selecting candidates, and connecting performance data to getting to know the picture of the right talent and improving the overall recruitment experience can be easily done using analytics (Mohapatra & Sahu, 2017). Analytics works right from the beginning of the recruitment process or even before that, figuring out the required skill set, knowledge, and characteristics for the right post. With redefined recruitment processes, retention algorithms, and improved diversity, Google has enhanced the effectiveness of HR practices through big data analytics (Mohapatra & Sahu, 2017).

For mass recruitment, organizations need less time-consuming methods that reduce workload. According to Davenport et al., (2010), talent analytics adds to HR through helping the management in workforce forecasting, key indicators, key points, talent supply chain, talent value model, and people investment analysis. Big-data analytics can significantly impact recruitment and selection (Berk et al., 2019), performance management, decision-making (Mcabee et al., 2016), and talent management as per (Margherita, 2022; Prokesch, 2017). People analytics can influence the planning, hiring, and changing of the behavior of employees (Thakur, 2017). Therefore, the recruitment process should be supported by evidence-based decision-making for HR analytics. Identifying the fit for the job, like candidate, attrition, and reducing cognitive bias, can be done by predictive data modeling (Peisl & Edlmann, 2020). HR attitude, opinion, strategies, and technical capabilities of an organization influence the recruitment process, if applied with HR marketing

instruments. Posthumus et al., (2018), analyzed the market data, using the instruments of segmentation and targeting for recruitment of employees in the pharmaceutical industry, which proved helpful. Organizations collect efficient data useful for decision-making and build recruitment strategies to make better decisions in the future through HR analytics. Empirical and conceptual studies have discovered an association between HR analytics and organizational effectiveness (Ben-gal, 2019).

According to the study conducted by Lam & Hawkes, (2017), Shell combined HR analytics and assessment specialists for recruitment on a project reviewing the recruitment methodology. The findings suggested updating assessment exercises as a long time between the interview slot and offer, and utilizing new online assessments. The better quality of recruitment process was ensured through rigorous evaluation and good candidate experience by analytics and assessment specialists. Accordingly, training programmes were developed to make the internal assessors understand how to make robust decisions on a digital platform and their role in the assessment changes.

Training and development

To compete, adapt, excel, innovate, produce, be safe, improve service, and achieve goals, employees must be trained in the organization. Research on training by Salas et al., (2012) concludes that the way a training program is developed, designed, delivered, and executed influences the effectiveness of an organization. The organization always wants to ensure its resources, to learn and grow continuously to face competition. Analytics allows the organization to identify the training program to be developed, delivered, and implemented to meet future demands. HR analytics can be seen as an employee management tool. Since most of the research focuses its attention on the fairness of the recruitment process, the research on the fairness of algorithmic decision-making and HR development is still in its infancy (Köchling & Wehner, 2020). The employee-related data stored in HRIS systems regarding their job status, performance, hours worked, health information, and personal data is utilized as it is available to HR function for shifting their focus from predicting the performance of candidates to developing

existing employees and talents. The employees' effective performance, well-being, motivation, enthusiasm, and skills require good training programs after identifying suitable training needs through HR analytics (Cotes & Ugarte, 2019).

Barbar et al., (2019) concluded that older organizations with more employees more frequently go with HR analytics for employee development and training purposes than younger organizations with fewer employees. Big organizations provide career management solutions and advise employees for online and offline training based on their requirements. They usually rely on recommender systems for evaluating employees for performance analysis. The pitfalls with the recommender system evoke or direct the fall toward HR analytics. Lee, (2018) concluded the decision-maker was manipulated by analyzing the fairness perception of managerial decisions in an online experiment. Hence, the perceived fairness executed by algorithms is less fair and trustworthy.

The effectiveness of a training program can also be judged by HR analytics. Analytics allows management to assess the performance outcomes overtime with the gathered data required to track and review employees' training and development needs. Barbar et al., (2019) sees HR analytics as an invaluable tool for all small and large businesses.

Performance Appraisal

The use of formal performance management systems increased from 69 to 87 percent by organizations from 1998 to 2004 in USA and UK (Armstrong & Baron, 2005). Performance is a management tool for evaluating employees based on work hours, productivity, workplace behavior, and/or specific criteria. Performance appraisal dispenses a crucial perspective on the potential for employee feedback that relates actively to increasing motivation, career development, and an opportunity to clarify goals and achieve long-term individual performance (Prowse & Prowse, 2009). The appraisal system requires performance measurement to be carried out in the organization. Performance measurement criteria being subjective differs from organization to organization. Different research like (Laird & Clampitt, 1985; Maas & Torres-González, 2011) has raised the issue of biased

performance evaluation. Organizations prefer following evidence-based performance appraisal systems as HR analytics owing to the demerits. According to A. Sharma & Sharma, (2017), the transformation from diary keeping to reduce inaccuracy to storing data in HRIS and applying analytics was not overnight. The precise, objective, and opportune flow of performance information determines the speed and quality of HR decision-making (Hill, 2013).

Artificial Intelligence combination with human resources, improves analytics. HR analytics works to uplift employees in various ways through organizational and their personal information. By analysing and evaluating the stored information about the employees for strategic decision-making and has completely transformed the way performance appraisal was carried out before. Now, by providing relevant information about efficient and productive employees, analytics decodes the pattern of their employee's performance and aids to discover the cause.

The aim of performance appraisal by HR analytics is not only to find the employees worthy of the promotion but also to find the reason behind the lack of unproductive performance of the other employees and provide solutions to them. The more an organization indulges in analytical practices, the more the analytical ability and individual performance improve (Kryscynski et al., 2017). Analytics can be seen as a medium for evaluating the organization's worth of human factors and HR practices. HR analytics provide organizations with the required information for performance appraisal decision-making of the employees. This kind of unbiased, timely, and accurate information analyzes by HR analytics reduces the chance of subjective decision-making.

Retention

Retention of employees is one of the crucial challenges faced by the organization. The leaving of competent employees leaves a long-lasting negative impact on the stability and performance of the organizations. Therefore, retaining productive employees is an important issue in front of management. Retention is an organization's ability to hold on to its employees with their willingness to serve

the organization through different employee engagement strategies. According to Singh et al., (2022) the significant role in improving the retention rate of employees under the mediation effect of big data predictive analytics cannot be neglected. The continuous efforts by management to retain employees and keep turnover at a minimum can be reduced through HR analytics.

The forms of analytics such as descriptive analytics analyze about current & past data and pattern events about what has happened; predictive analytics describes what will happen next and how it will impact business in the future; prescriptive analytics talks about what should be done to overcome the problem can be taken into consideration. Predictive HR analytics connects to employee retention, development and acquisition as per Gurusinghe et al., (2021) and also amplifies organizational performance and influences HR practices by favorable decisions for upgrading employee management. The research by Avrahami et al., (2022) associates turnover with competencies, cultural values, commitment, and trust as antecedents. Rombaut & Guerry, (2019) analyzed the effect of employee retention strategies on employee turnover through a data-driven approach and found compensation and recognition to impact employee turnover significantly. Mohammed, (2019) analyses models which show the use of data to discover the causes behind employees leaving the organization and how the organization can utilize that information to develop strategies for their retention.

Kaur & Fink, (2017) found predictive models to be used by organizations for hiring, attrition, designing employee benefits based on employee demographics and patterns, and retention. The use of HR analytics by the organization for needs and rating the management practices, for improvement is practiced for making alternate employee engagement strategies through surveys. Big data predictive analytics mediated the role played by strategic HRM in improving the retention rate (Singh et al., 2022). H. Sharma & Shukla, (2020) concluded that retention makes the organization understand their personnel, the crucial root variables required by them to be engaged, and the points for which they are ready to turn to organization.

Discussion

Doubtlessly HR analytics brings value addition to the organization. The transformation HR analytics has done to HRM is magnificent. The evolution from intuition-based decision making to evidence-based decision making reducing the bias was possible through HR analytics. The advancement of technology has made big data and HRM work together for the efficient management of resources by pointing out the importance of understanding the workforce attitudes, behavior, opinions, and feedback. The decision making of an organization is crucial as it affects the performance and efficiency. The use of HR analytics by organizations like Google, IBM, Tata Groups, Shell, etc., are live examples with improved decision-making, productivity, performance, and efficiency. The stored data regarding the employees aids the management in different HR practices and functions such as recruitment and selection, employee engagement, retention, training, and development and overcome challenges of turnover. Batistic & Laken, (2019) points toward the scarcity of research linking big data analytics and organizational performance. While Samson & Bhanugopan, (2022) has favoured the enhanced performance of organization by HR analytics mediated by decision-making. HR analytics, add strategic value to the organization by enhancing the employees' knowledge and skills, thereby improving performance (Gurusinghe et al., 2021).

By providing insights about the employees, HR analytics makes the privacy, ethical concerns, and security of the employees and the vitals of the organization vulnerable (Chatterjee et al., 2022). Analyses of data done through HR analytics includes their workhours, performance, efficiency, workplace behavior and their personal information, which the employee may or may not risk sharing. For collecting this data organizations use cameras, surveys, audio recordings, call recordings, mail and location tracking with or without their acknowledgement and permission. HR analytics creates an illusion of control due to its high dependence on algorithm processes, leading to problems like transparency, accountability, employees' autonomy, and marginalization of human reasoning (Giermindl et al., 2021). Also, the measurement of

subjective data is done in numerical form, most likely through the Likert rating scales which clearly doesn't provide the exact measurement of variable such as loyalty, commitment, satisfaction therefore the results after analyses are approx. not exact. Hence the evidence-based decision making through HR analytics is not exact description of the situation. The advantages of having HR analytics can be many but the concerns before implementing HR analytics are more severe.

Suggestions and Recommendations

Following are the suggestions and recommendation organization can follow for better implementation of HR analytics.

- Opacity, datafication of the workplace, and nudging as the primary virtue ethical challenges should be addressed by organizations.
- Before implementing HR analytics in organizations, the privacy and security of the employee's data should be taken utmost care of while maintaining transparency.
- Providing training and workshops to develop employees' confidence, and creating an agile workforce is necessary for the acceptance of HR analytics.
- Organizations should have the post of ethical data managers, who will supervise the analytics process to be carried out ethically and reduce its negative impact.
- Organizations should build organizational, technological, and environmental capabilities considering the challenges for smooth implementation.

Conclusion

This research suggests that HR analytics has the undiscovered potential to completely transform the management of resources in organization. Based on this, HR analytics can be concluded as evidence or data-based approach for strategic management and decisions in the organization to enhance performance and effectiveness by transforming the various HR. This study uncovers the scarcity of research on HR analytics in the non-western context. Owing to the infancy stage of research on HR analytics, the practical and efficient way to use HR analytics to improve employees and management is yet to

be discovered. Also, the ethical approach while the implementation of HR analytics in organizations has not been covered in research. Keeping in mind the negative consequences analytics brings to the management, HR analytics can potentially transform the working of HRM.

Managerial and Practical Implications

The managerial implications for the firms and institutions are a thorough understanding of how HR analytics influences the working of HRM. The study promotes the use of HR analytics in an organization by highlighting improved, decision-making, and performance. The study adds to the existing literature how HRM practices are transforming by HR analytics through a conceptual approach. Ethical concerns, safety and security measures, and psychological consequences of HR analytics before implementing analytics in the organization are generally ignored. Policy makers and organizations can come together and address the issue of ethical safety of employees through policies, rules, and regulation. A team for the ethical discharge of information can be formed in organizations working with transparency, responsibility and accountability.

References

- Armstrong, M., & Baron, A. (2005). Managing performance: performance management in action. [https://books.google.com/books?hl=en&lr=&id=qWR_SZPmQh8C&oi=fnd&pg=PA1&dq=Armstrong,+M.+and+Baron,+A.+\(2005\),+Managing+Performance:+Performance+Management+in+Action&ots=PqAfDgLQR&sig=CL8BIj4jS0HD3X2INzCqRus7hg](https://books.google.com/books?hl=en&lr=&id=qWR_SZPmQh8C&oi=fnd&pg=PA1&dq=Armstrong,+M.+and+Baron,+A.+(2005),+Managing+Performance:+Performance+Management+in+Action&ots=PqAfDgLQR&sig=CL8BIj4jS0HD3X2INzCqRus7hg)
- Avrahami, D., Pessach, D., Singer, G., & Chalutz Ben-Gal, H. (2022). A human resources analytics and machine-learning examination of turnover: implications for theory and practice. *International Journal of Manpower*. <https://doi.org/10.1108/IJM-12-2020-0548>
- Barbar, K., Choughri, R., & Soubjaki, M. (2019). The Impact of HR Analytics on the Training and Development Strategy - Private Sector Case Study in Lebanon. *Journal of Management and Strategy*, 10(3). <https://doi.org/10.5430/jms.v10n3p27>

- Batistic, S., & Laken, P. Van Der. (2019). History , Evolution and Future of Big Data and Analytics : A Bibliometric Analysis of Its Relationship to Performance in Organizations. *British Journal of Management*, 30, 229–251. <https://doi.org/10.1111/1467-8551.12340>
- Ben-gal, H. C. (2019). An ROI-based review of HR analytics : practical implementation tools. *Personnel Review*, 48(6), 1429–1448. <https://doi.org/10.1108/PR-11-2017-0362>
- Berk, L., Bertsimas, D., Weinstein, A. M., & Yan, J. (2019). Prescriptive analytics for human resource planning in the professional services industry. *European Journal of Operational Research*, 272(2), 636–641. <https://doi.org/10.1016/j.ejor.2018.06.035>
- Blackburn, M., Alexander, J., Legan, J. D., & Klabjan, D. (2017). Big Data and the Future of R & D Management. *Research-Technology Management*, 60(5), 43–51. <https://doi.org/10.1080/08956308.2017.1348135>
- Bondarouk, T. V., & Ruël, H. J. M. (2009). Electronic human resource management: Challenges in the digital era. *International Journal of Human Resource Management*, 20(3), 505–514. <https://doi.org/10.1080/09585190802707235>
- Chatterjee, S., Chaudhuri, R., Vrontis, D., & Siachou, E. (2022). Examining the dark side of human resource analytics: an empirical investigation using the privacy calculus approach. *International Journal of Manpower*, 43(1), 52–74. <https://doi.org/10.1108/IJM-02-2021-0087>
- Cotes, J., & Ugarte, S. M. (2019). A systemic and strategic approach for training needs analysis for the International Bank. *Journal of Business Research*, May, 1–10. <https://doi.org/10.1016/j.jbusres.2019.05.002>
- Davenport, T. H., Harris, J., & Shapiro, J. (2010). Competing on Talent Analytics. *Harvard Business Review*.
- Giermindl, L. M., Strich, F., Christ, O., & Leichtdeobald, U. (2021). The dark sides of people analytics : reviewing the perils for organisations and employees. *European Journal of Information Systems*, 00(00), 1–26. <https://doi.org/10.1080/0960085X.2021.1927213>
- Gurusinghe, R. N., Arachchige, B. J. H., & Dayarathna, D. (2021). Predictive HR analytics and talent management : a conceptual framework. *Journal of Management Analytics*, 8(2), 195–221. <https://doi.org/10.1080/23270012.2021.1899857>
- Hill, J. (2013). USING THE CLOUD TO ACCELERATE TRANSFORMATION AND INFLUENCE CHANGE RATES. *Performance Improvement*, 52(5), 19–27. <https://doi.org/10.1002/pfi>
- Kappelman, L., Johnson, V., Torres, R., & Maurer, C. (2018). A study of information systems issues , practices , and leadership in Europe. *European Journal of Information Systems*, 00(00), 1–17. <https://doi.org/10.1080/0960085X.2018.1497929>
- Kaur, J., & Fink, A. A. (2017). Trends and Practices in Talent Analytics. *Society for Human Resource Management*, 1–7. http://www.siop.org/SIOP-SHRM/201710_SHRM-SIOP_TalentAnalytics.pdf
- Kim, S., Wang, Y., & Boon, C. (2020). Sixty years of research on technology and human resource management : Looking back and looking forward. *Human Resource Management*, 1–19. <https://doi.org/10.1002/hrm.22049>
- Köchling, A., & Wehner, M. C. (2020). Discriminated by an algorithm: a systematic review of discrimination and fairness by algorithmic decision-making in the context of HR recruitment and HR development. *Business Research*, 13(3), 795–848. <https://doi.org/10.1007/s40685-020-00134-w>
- Kryscynski, D., Russell, G., Reeves, C., & Michael, R. S. (2017). Analytical abilities and the performance of HR professionals. 1–24. <https://doi.org/10.1002/hrm.21854>
- Laird, A., & Clampitt, P. G. (1985). Effective Performance Appraisal: Viewpoints from Managers. *Journal of Business Communication*, 22(3), 49–57. <https://doi.org/10.1177/002194368502200305>

- Lam, S., & Hawkes, B. (2017). From analytics to action: how Shell digitized recruitment. *Strategic HR Review*, 16(2), 76–80. <https://doi.org/10.1108/shr-01-2017-0005>
- Larsson, A., & Edwards, M. R. (2021). Insider econometrics meets people analytics and strategic human resource management. *The International Journal of Human Resource Management*, 0(0), 1–47. <https://doi.org/10.1080/09585192.2020.1847166>
- Lee, M. K. (2018). Understanding perception of algorithmic decisions: Fairness, trust, and emotion in response to algorithmic management. *Big Data and Society*, 5(1), 1–16. <https://doi.org/10.1177/2053951718756684>
- Levenson, A. (2017). Using workforce analytics to improve strategy execution. *Human Resource Management*, 1–16. <https://doi.org/10.1002/hrm.21850>
- Maas, V. S., & Torres-González, R. (2011). Subjective Performance Evaluation and Gender Discrimination. *Journal of Business Ethics*, 101(4), 667–681. <https://doi.org/10.1007/s10551-011-0763-7>
- Margherita, A. (2022). Human resources analytics: A systematization of research topics and directions for future research. *Human Resource Management Review*, November. <https://doi.org/10.1016/j.hrmr.2020.100795>
- Marler, J. H., & Boudreau, J. W. (2016). An evidence-based review of HR Analytics. *International Journal of Human Resource Management*, 28(1), 3–26. <https://doi.org/10.1080/09585192.2016.1244699>
- Mcabee, S. T., Landis, R. S., & Burke, M. I. (2016). Inductive reasoning : The promise of big data. *Human Resource Management Review*, 1–14. <https://doi.org/10.1016/j.hrmr.2016.08.005>
- McCartney, S., & Fu, N. (2022). Bridging the gap: why, how and when HR analytics can impact organizational performance. *Management Decision*, 60(13), 25–47.
- Melver, D., Lengnick-hall, M. L., & Lengnick-hall, C. A. (2018). A strategic approach to workforce analytics : Integrating science and agility. *Business Horizons*, 1–11. <https://doi.org/10.1016/j.bushor.2018.01.005>
- Mohammed, D. A. Q. (2019). HR ANALYTICS: A MODERN TOOL IN HR FOR PREDICTIVE DECISION MAKING Dr. *Journal of Management*, 6(3), 51–63. <https://doi.org/10.34218/jom.6.3.2019.007>
- Mohapatra, M., & Sahu, P. (2017). Optimizing the Recruitment Funnel in an ITES Company: An Analytics Approach. *Procedia Computer Science*, 122, 706–714. <https://doi.org/10.1016/j.procs.2017.11.427>
- Nagpal, T., & Mishra, M. (2021). Analyzing Human Resource Practices For Decision Making in Banking Sector using HR analytics. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2020.12.460>
- Peisl, T., & Edlmann, R. (2020). Exploring Technology Acceptance and Planned Behaviour by the Adoption of Predictive HR Analytics During Recruitment. *Communications in Computer and Information Science*, 1251 CCIS, 177–190. https://doi.org/10.1007/978-3-030-56441-4_13/COVER
- Posthumus, J., Bozer, G., & Joseph C. Santora. (2018). The use of market analytics in the recruitment of high potentials in the pharmaceutical industry. *European Journal of International Management*, January 2019. <https://doi.org/10.1504/EJIM.2018.10014150>
- Prokesch, S. (2017). Reinventing Talent Management: How GE Uses Analytics to Guide a More Digital, Far-Flung Workforce. *Harvard Business Review*. https://scholar.harvard.edu/people_analytics/publications/task-now-just-perform-execute-and-let-market-make-its-own
- Prowse, P., & Prowse, J. (2009). The dilemma of performance appraisal. *Measuring Business Excellence*, 13(4), 69–77. <https://doi.org/10.1108/13683040911006800>
- Rombaut, E., & Guerry, M. (2019). The effectiveness of employee retention through an uplift modeling approach. *International Journal of Manpower*. <https://doi.org/10.1108/IJM-04-2019-0184>
- Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The Science of Training and

- Development in Organizations: What Matters in Practice. *Psychological Science in the Public Interest*, 13(2), 74–101. <https://doi.org/10.1177/1529100612436661>
- Samson, K., & Bhanugopan, R. (2022). Strategic human capital analytics and organisation performance: The mediating effects of managerial decision-making. *Journal of Business Research*, 144(July 2020), 637–649. <https://doi.org/10.1016/j.jbusres.2022.01.044>
 - Sharma, A., & Sharma, T. (2017). HR analytics and performance appraisal system: A conceptual framework for employee performance improvement. *Management Research Review*, 40(6). <https://doi.org/10.1108/MRR-04-2016-0084>
 - Sharma, H., & Shukla, S. (2020). Role of Predictive Analytics in Employee Retention: Corporate Cases. *Unnayan*, 12(2), 155–178. https://www.academia.edu/43760956/Role_of_Predictive_Analytics_in_Employee_Retention_Corporate_Cases
 - Shet, S. V., Poddar, T., Wamba Samuel, F., & Dwivedi, Y. K. (2021). Examining the determinants of successful adoption of data analytics in human resource management – A framework for implications. *Journal of Business Research*, 131(August 2020), 311–326. <https://doi.org/10.1016/j.jbusres.2021.03.054>
 - Singh, R., Sharma, P., Foroapon, C., & Belal, H. M. (2022). The role of big data and predictive analytics in the employee retention: a resource-based view. In *International Journal of Manpower* (Vol. 43, Issue 2). <https://doi.org/10.1108/IJM-03-2021-0197>
 - Thakur, S. J. (2017). PEOPLE ANALYTICS IN THE ERA OF BIG DATA: CHANGING THE WAY YOU ATTRACT, ACQUIRE, DEVELOP, AND RETAIN TALENT-Web of Science Core Collection. *Personnel Psychology*, 70(4), 929–930. <https://www.webofscience.com/wos/woscc/full-record/WOS:000414335800008>
 - Tursunbayeva, A., Pagliari, C., Lauro, S. Di, & Antonelli, G. (2022). The ethics of people analytics : risks , opportunities and recommendations. *Personnel Review*. <https://doi.org/10.1108/PR-12-2019-0680>
 - Ulrich, D., & Dulebohn, J. H. (2015). Are we there yet ? What 's next for HR ? *Human Resource Management Review*, 1–17. <https://doi.org/10.1016/j.hrmr.2015.01.004>
 - Zhou, Y., Liu, G., Chang, X., & Wang, L. (2020). The impact of HRM digitalization on firm performance : investigating three-way interactions. *Asia Pacific Journal of Human Resources*, 24. <https://doi.org/10.1111/1744-7941.12258>