Management Studies and Business Journal (PRODUCTIVITY)
Vol 1 (1) 2024 : 182-189

The Integration of HR Analytics and Decision-Making

Integrasi Analisis SDM dan Pengambilan Keputusan

[1]Ahmad Muktamar, [2]Nurnaningsih A
[1]Institut Lamaddukkelleng Sengkang, [2]Institut Agama Islam As'adiyah Sengkang
*ahmadmuktmarku1221@gmail.com

**Corresponding Author*

ABSTRACT
Integrating HR Analytics into organizational decision-making processes is crucial for modern businesses looking to improve human resource management practices and drive better decision-making outcomes. This systematic literature review explores the importance of HR Analytics integration, its key determinants, and its impact on organizational performance and decision-making effectiveness. Through an analysis of existing literature, this review identifies factors that influence HR Analytics integration, such as data collection practices, technology availability, managerial skills, and organizational policies. This review also revealed a research gap regarding the optimal use of HR Analytics for strategic decision making, highlighting the need for further research in this area. Overall, these findings underscore the importance of HR Analytics in driving better HR management practices and better organizational decision-making outcomes.
Keywords: HR Analytics, human resource management, decision making, systematic literature review, organizational performance, data analysis, integration, strategic decision making

ABSTRAK
Integrasi HR Analytics ke dalam proses pengambilan keputusan organisasi menjadi hal yang krusial bagi bisnis modern yang mencari untuk meningkatkan praktik manajemen sumber daya manusia dan mendorong hasil pengambilan keputusan yang lebih baik. Tinjauan literatur sistematis ini menjelajahi pentingnya integrasi HR Analytics, penentu utamanya, dan dampaknya pada kinerja organisasi dan efektivitas pengambilan keputusan. Melalui analisis literatur yang ada, tinjauan ini mengidentifikasi faktor-faktor yang memengaruhi integrasi HR Analytics, seperti praktik pengumpulan data, ketersediaan teknologi, keterampilan manajerial, dan kebijakan organisasi. Tinjauan ini juga mengungkap adanya kesenjangan penelitian mengenai pemanfaatan optimal HR Analytics untuk pengambilan keputusan strategis, yang menekankan perlunya penelitian lebih lanjut di bidang ini. Secara keseluruhan, temuan ini menegaskan pentingnya HR Analytics dalam mendorong praktik manajemen SDM yang lebih baik dan hasil pengambilan keputusan organisasi yang lebih baik.
Kata Kunci: HR Analytics, manajemen sumber daya manusia, pengambilan keputusan, tinjauan literatur sistematis, kinerja organisasi, analisis data, integrasi, pengambilan keputusan strategis.

Introduction

The integration of HR analytics and decision-making is an important topic, but the given search result is not directly related to it. The search result discusses the integration of Balanced Scorecard and Analytic Hierarchy Process as a tool for determining the priority of the program strategy in a hospital. However, the Analytic Hierarchy Process (AHP) method mentioned in the search result can be used to capture both subjective and objective aspects of a decision, which can be useful in HR analytics and decision-making. AHP can help reduce bias in the decision-making process by combining techniques that are useful for checking the consistency of decision-making evaluations. Therefore, AHP can be a valuable tool for HR professionals to make informed decisions based on both subjective and objective data (Mohammed,2019).

HR Analytics, or Human Resources Analytics, is an analytical approach that uses data and statistical methods to analyze various aspects related to human resources in an organization. The main goal of HR Analytics is to understand and improve organizational performance through a better understanding of the factors that influence productivity, employee satisfaction, and the success of

employee recruitment and retention (Dahlbom,2020). HR Analytics covers various areas in human resource management, such as recruitment, training and development, performance evaluation, talent management, compensation and benefits, and employee satisfaction analysis. By using data analysis techniques, HR Analytics helps organizations make better and more focused decisions in managing their human resources (Sousa,2018).

HR analytics can help organizations improve employee performance in several ways: (1) Identifying high-performing employees: HR analytics can help identify top performers based on their performance data, which can inform succession planning and talent management strategies. Predicting employee turnover: By predicting employee turnover, organizations can take proactive measures to retain their top talent, such as offering training, development opportunities, or competitive compensation packages. (2) Enhancing employee engagement: HR analytics can help organizations understand employee engagement levels and identify factors that contribute to engagement, such as job satisfaction, work-life balance, and career development opportunities. (3) Improving employee training and development: HR analytics can help organizations identify areas where employees need additional training or development, which can improve their performance and contribute to the organization's overall success. (4) Reducing bias in performance appraisals: HR analytics can help reduce subjectivity in performance appraisals, which can improve employees' perceptions of fairness and accuracy, leading to increased motivation and performance. (5) Aligning performance with organizational goals: HR analytics can help organizations align employee performance with their strategic goals, ensuring that employees are working towards the organization's overall succes. (6) Measuring the effectiveness of HR initiatives: HR analytics can help organizations measure the effectiveness of HR initiatives, such as training programs, employee engagement efforts, and talent management strategies, which can inform future decision-making. (7) Identifying trends and patterns: HR analytics can help organizations identify trends and patterns in employee data, such as performance, turnover, and engagement, which can inform decision-making and improve organizational performance. (8) Improving employee well-being: HR analytics can help organizations understand the factors that contribute to employee well-being, such as work-life balance, job satisfaction, and stress levels, which can inform HR strategies and improve employee performance. (9) Enhancing organizational competitiveness: By improving employee performance, HR analytics can help organizations enhance their competitiveness and sustainability in the market (Sousa,2018) (Jain,2020).

Through data collection, processing and analysis, HR Analytics can provide valuable insights into trends, patterns and relationships between variables that influence employee performance and the organization as a whole (Sousa,2019). With this deeper understanding, management can identify areas where improvement is needed, as well as develop strategies and policies that are more effective in managing human resources. Thus, HR Analytics is becoming an essential tool for modern organizations in optimizing their human resource management, increasing operational efficiency, and achieving larger business goals (Jain,2020).

HR analytics refers to the application of data, statistical methods, and predictive modeling to human resources (HR) processes and functions. It aims to provide HR professionals with insights and evidence-based decision-making to improve organizational performance, employee engagement, and talent management. HR analytics is used in decision-making by (Zeidan,2020)(Chalutz ,2019): (1) Identifying trends and patterns: HR analytics can help identify trends and patterns in employee data, such as performance, turnover, and engagement. This information can be used to make informed decisions about HR strategies and initiatives. (2) Predicting future outcomes: HR analytics can help predict future outcomes, such as employee turnover, performance, and engagement. This information can be used to make proactive decisions and prevent issues before they arise. (3) Evaluating the effectiveness of HR initiatives: HR analytics can help evaluate the effectiveness of HR initiatives, such as training programs, employee engagement efforts, and talent management strategies. This information can be used to make data-driven decisions about which initiatives are most effective and which ones need to be improved. (4) Reducing bias in decision-making: HR analytics can help reduce bias in decision-making by providing objective data and evidence-based insights. This information can be used to make more informed and fair decisions about employee performance, promotions, and other HR-related matters. (5) Improving employee engagement and satisfaction: HR analytics can help improve employee engagement and satisfaction by providing insights into employee needs and preferences. This information can be used to make data-driven decisions about employee benefits, training programs, and other HR initiatives.

One tool that can be used to capture both subjective and objective aspects of a decision in HR analytics is the Analytic Hierarchy Process (AHP). AHP is a decision-making technique that helps reduce complex decisions into a series of paired comparisons, and then synthesizes the results to capture the subjective and objective aspects of a decision (Fernandez,2021) AHP can help reduce bias in the decision-making process by providing objective data and evidence-based insights. The use of HR Analytics, or human resources data analysis, has become increasingly important in organizational decision-making processes. Especially in this digital era, where data is available in large quantities and analytics technology continues to develop rapidly, the integration of HR Analytics with decision making has become a key focus for many companies (Reddy,2017).

The importance of this research cannot be underestimated considering the crucial role of HR Analytics in providing deep insights into employee performance, recruitment trends, retention and other key aspects of HR management. However, despite its clear importance, challenges remain in effectively integrating HR Analytics into organizational decision-making processes. This research problem phenomenon is seen in the gap between the potential of HR Analytics and its actual application in organizational decision making. Although many organizations have collected significant HR data, there is still a lack of optimal utilization of this data to support strategic decision making. This can be caused by a variety of factors, including a lack of understanding of complex data analysis technologies, a lack of data analysis skills at the managerial level, and organizational cultural barriers to adopting a data-driven approach. Therefore, this study aims to explore these issues in more depth through a systematic literature review.

Research Methods

The research method used in this research is a systematic literature review. First of all, the research begins by identifying relevant keywords such as “HR Analytics”, “Decision-Making”, “Integration”, and other related phrases. These keywords are then used to search for articles and related scientific literature in academic databases such as Web of Science, ScienceDirect, Scopus, IEEE Xplore and Google Scholar.

After keywords are identified, the search process is carried out by looking for articles that are relevant to the research topic. The number of articles found varies depending on the database used and the time span of the search. These articles were then screened based on certain inclusion and exclusion criteria, such as relevance to the research topic, year of publication, and methodological quality of the research.

After the screening process was complete, articles that met the inclusion criteria were then analyzed in detail. The main information and findings from each article are recorded and synthesized to form a comprehensive understanding of the research topic. The results of this analysis are then used to develop a systematic literature synthesis that describes trends, findings, and research gaps in the integration of HR Analytics with decision making.

Results and Discussion

Level of Integration of HR Analytics in Organizational Decision Making Process

It reflects the extent to which HR Analytics is integrated into an organization's decision-making process. This variable can be measured based on factors such as the existence of a technological infrastructure that supports HR Analytics, the availability of relevant data, the level of analytical skills and understanding among HR personnel and management, and the level of adoption of HR Analytics practices in daily decision-making processes.

1. **The amount and type of HR data collected**

The amount and type of HR data collected is an indicator that describes how comprehensive the organization is in collecting data related to employees and human resource management (HR) activities. The amount of data collected covers various aspects, such as employee demographic data, employment history, performance, experience, as well as data related to recruitment, training and development. Meanwhile, the types of data collected include quantitative data (for example sales numbers, attendance rates, or turnover figures) and qualitative data (for example employee feedback, performance evaluation results, or interview results) (Arora,2021)

Hypothesis: The more complete and diverse the types of HR data collected by an organization, the higher the level of integration of HR Analytics in the organization's decision-making process. This is based on the assumption that the existence of more complete and diverse data will

provide a stronger basis for applying HR Analytics analysis in decision making, thereby increasing the effectiveness and accuracy of decisions made.

2. **Availability of data analysis technology**

The availability of data analysis technology reflects the extent to which an organization's information technology infrastructure is able to support human resource (HR) data analysis. This includes aspects such as the existence of sophisticated database management software and systems, large data storage and processing capabilities, and accessibility to data analysis tools such as machine learning or artificial intelligence techniques. Apart from that, the availability of experts and IT personnel who are trained in applying data analysis technology is also an important consideration in assessing the availability of data analysis technology (Barbar,2019).

Hypothesis: The more advanced an organization's information technology infrastructure is in supporting HR data analysis, the higher the level of HR Analytics integration in the organization's decision-making process. This is assumed to be because advanced data analytics technologies enable organizations to manage, analyze and extract deeper insights from HR data more efficiently and accurately. Therefore, the availability of good data analysis technology can improve an organization's ability to use HR Analytics to support better decision making.

3. **Level of data analysis skills at managerial level**

The level of data analysis skills at the managerial level is a measure of management's understanding and practical ability in applying human resource (HR) data analysis in decision making. This includes an understanding of the basic concepts of data analysis, skills in processing and analyzing data using various statistical techniques, and the ability to interpret and apply the results of data analysis in the context of HR decision making (Shet,2021).

Hypothesis: The higher the level of data analysis skills at the managerial level, the higher the level of integration of HR Analytics in the organizational decision making process. This is based on the assumption that management who have strong data analysis skills will be better able to understand and apply the insights gained from HR Analytics in making strategic decisions regarding human resources. Therefore, improving data analysis skills at the managerial level can strengthen the integration of HR Analytics and improve the quality of decisions made in HR management.

4. **Availability of policies and procedures related to HR Analytics**

The availability of policies and procedures related to HR Analytics is an indicator that describes the extent to which an organization has a clear and structured framework to support the use of HR Analytics in decision making. This includes the existence of policies governing the collection, processing and use of HR data, as well as procedures detailing the steps to be followed in applying data analysis to support HR decision making. These policies and procedures may cover things such as data collection standards, data privacy and security, responsibilities for managing data, and guidelines for the interpretation and use of analysis results (Hearne,2023).

Hypothesis: The more complete and clear the policies and procedures related to HR Analytics, the higher the level of integration of HR Analytics in the organization's decision-making process. This is assumed to be because the existence of supporting policies and procedures provides clear direction for the use of HR Analytics, reduces uncertainty and increases confidence in the use of data in decision making. Therefore, organizations that have a strong framework of policies and procedures regarding HR Analytics are likely to have better integration of HR Analytics in decision making.

Organizational Performance or Decision Effectiveness

This variable evaluates the results of using HR Analytics in the organization's decision-making process. This can be measured through various organizational performance indicators, such as employee productivity, retention rates, employee satisfaction, operational efficiency, and achievement of business goals. The higher the integration of HR Analytics, the more effective the resulting decisions, and as a result, the higher the overall organizational performance (Wirges,2023) (Belizón,2022)..

1. **Financial performance**

Financial performance is an indicator that measures the financial results of an organization, which includes revenue, net profit and profit growth from period to period. An organization's financial performance can be influenced by decisions made using HR Analytics in human resource (HR)

management. For example, strategic decisions regarding employee recruitment, training, promotion, and development can impact employee productivity, efficiency, and satisfaction, which in turn can affect an organization's overall financial performance (Gurusinghe,2021).

Hypothesis: The level of HR Analytics integration in an organization's decision-making process has a positive relationship with the organization's financial performance. This is based on the assumption that effective use of HR Analytics can help organizations make more precise and informed HR decisions, which can ultimately increase employee productivity, efficiency and quality, thereby having a positive impact on the organization's financial performance.

2. **Employee Satisfaction**

Employee satisfaction is an indicator that measures the level of employee satisfaction, motivation and involvement with their work and work environment. This reflects the effectiveness of human resources (HR) decisions in supporting employees. Satisfied and engaged employees tend to have better performance, lower absenteeism rates, and higher retention rates (Jensen,2021).

Hypothesis: The level of integration of HR Analytics in the organization's decision-making process has a positive relationship with employee satisfaction. By using HR Analytics effectively, organizations can make better decisions when it comes to recruiting, developing and managing employees, which in turn can increase employee satisfaction and engagement. This can create a more productive and positive work environment, which can ultimately improve the overall performance and success of the organization.

3. **Recruitment and Retention Performance**

Recruitment and retention performance is an indicator that measures the effectiveness of human resource (HR) decisions in managing the employee recruitment and retention process. It includes a variety of metrics, such as employee turnover rate, time to hire, and employee retention rate. Low turnover rates and fast hiring times usually indicate that HR decisions in employee recruitment and retention are working effectively (Arora,2020).

Hypothesis: The level of HR Analytics integration in an organization's decision-making process has a positive relationship with employee recruitment and retention performance. By using HR Analytics effectively, organizations can analyze and understand recruitment patterns and factors that influence employee retention. This can help them make more strategic decisions in terms of employee recruitment, placement and development, which in turn can improve employee recruitment and retention performance.

4. **Organizational Innovation**

Organizational innovation is an indicator that measures the extent to which an organization is able to generate new ideas, adopt new technology, and adapt to changes in the business environment. This reflects the organization's ability to continuously develop and compete in a dynamic market. Human resources (HR) decisions supported by HR Analytics can influence an organization's level of innovation by assisting in the identification of employee talents and competencies, facilitating collaboration and communication between teams, and supporting the development of an inclusive and achievement-oriented work culture (Margherita,2022).

Hypothesis: The level of integration of HR Analytics in the organization's decision-making process has a positive relationship with the level of organizational innovation. By using HR Analytics effectively, organizations can better identify and utilize employee potential, strengthen collaboration between teams, and develop more appropriate HR development strategies. This can encourage the creation of a more innovative and adaptive work environment, which can ultimately increase the organization's ability to create added value and maintain a competitive advantage in the market.

By observing and measuring these variables, we can understand the extent to which HR Analytics integration impacts organizational performance and the effectiveness of their decisions.

Research Framework

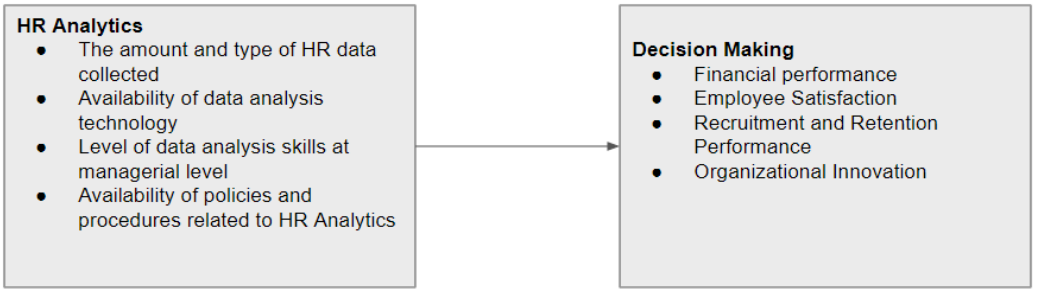

Figure 1. Research Framework

This framework shows that HR Analytics integration can have a significant impact on various aspects of organizational performance and results, such as financial performance, employee satisfaction, recruitment & retention performance, and organizational innovation. Therefore, this study aims to understand more deeply the relationship between HR Analytics integration and various performance indicators and outcomes of these organizations through a systematic literature review.

Conclusion

Integrating HR Analytics into an organization's decision-making process has become essential for modern businesses looking to optimize their human capital management. Through a systematic literature review, it is seen that HR Analytics offers valuable insights into employee performance, recruitment trends, retention strategies, and other key aspects of HR management. However, while the potential benefits of HR Analytics are clear, there are challenges in effectively integrating it into an organization's decision-making process. Key findings from the literature review include the importance of collecting diverse HR data, ensuring the availability of advanced data analysis technology, fostering data analysis skills among managerial staff, and establishing supporting policies and procedures for the implementation of HR Analytics. These factors contribute to the level of HR Analytics integration within an organization, which in turn influences organizational performance and decision-making effectiveness.

The literature review also highlights the existence of a research gap regarding the optimal use of HR Analytics for strategic decision making. Although HR data is increasingly available, many organizations struggle to leverage it effectively to support strategic decision making. This gap emphasizes the need for further research to explore barriers to HR Analytics integration and identify best practices to maximize its impact on the decision-making process.

In conclusion, HR Analytics serves as an important tool for organizations to improve their human resource management practices and drive better decision-making outcomes. By overcoming challenges and harnessing the potential of HR Analytics, organizations can improve employee satisfaction, performance, and overall organizational success.

Referrences

Al Kafit, M. A., & Saputri, R. D. A. (2023). Pengaruh Diklat Karyawan, Kemampuan Karyawan dan Komunikasi terhadap Kinerja Karyawan Pada PT. Pln (Persero) Area Pelayanan dan Jaringan Sidoarjo. Jurnal Informatika Ekonomi Bisnis, 1162-1165.

Amalia, M. R. (2024). The Impact of Digital Era 4.0 Transformation on Human Resources Management. Management Studies and Business Journal (PRODUCTIVITY), 1(1), 89-98.

Arora, M., Prakash, A., & Singh, S. (2020). HR Analytics–New Insight in Human Resource Management. ADVANCES IN MANAGEMENT, SOCIAL SCIENCES AND TECHNOLOGY, 56.

Arora, M., Prakash, A., Mittal, A., & Singh, S. (2021, December). HR analytics and artificial intelligence-transforming human resource management. In 2021 International Conference on Decision Aid Sciences and Application (DASA) (pp. 288-293). IEEE.

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), 27.

Belizón, M. J., & Kieran, S. (2022). Human resources analytics: A legitimacy process. Human Resource Management Journal, 32(3), 603-630.

Chalutz Ben-Gal, H. (2019). An ROI-based review of HR analytics: practical implementation tools. Personnel Review, 48(6), 1429-1448.

Dahlbom, P., Siikanen, N., Sajasalo, P., & Jarvenpää, M. (2020). Big data and HR analytics in the digital era. Baltic Journal of Management, 15(1), 120-138.

Fernandez, V., & Gallardo-Gallardo, E. (2021). Tackling the HR digitalization challenge: key factors and barriers to HR analytics adoption. Competitiveness Review: An International Business Journal, 31(1), 162-187.

Fionasari, R. (2017). A Comparison Between the Effect of Using Visual Imagery Strategy and Self-Monitoring Approach for Reading and Thinking (SMART) Strategy on Students' Reading Comprehension at SMK Keuangan Pekanbaru (Doctoral dissertation, Universitas Islam Negeri Sultan Syarif Kasim Riau).

Fionasari, R. (2024). Economic, Social and Environmental Impacts on Community-Based Ecotourism. Economics Studies and Banking Journal (DEMAND), 1(1), 1-8.

Gurusinghe, R. N., Arachchige, B. J., & Dayarathna, D. (2021). Predictive HR analytics and talent management: a conceptual framework. Journal of Management Analytics, 8(2), 195-221.

Hearne, J. (2023). Strategic Integration of HR Data Analytics in Human Resource Offices (Doctoral dissertation, University of Maryland University College).

Hidayat, M., & Basuil, D. A. (2024). Strategic Human Resource Planning in the Era of Digital Transformation. Management Studies and Business Journal (PRODUCTIVITY), 1(1), 130-137.

Huda, A., Kurniawan, I., Purba, K. F., Ichwani, R., & Fionasari, R. (2024). Techno-economic assessment of residential and farm-based photovoltaic systems. Renewable Energy, 222, 119886.

Jain, P., & Jain, P. (2020). Understanding the concept of HR analytics. International Journal on Emerging Technologies, 11(2), 644-652.

Jemmy, J., Hendrilia, Y., Suharmono, S., Aji, L. J., Oci, M., & Ahyani, E. (2023). Systematic Education Management And Conceptual Framework In Improving The Quality Of Education: Literature Review. Innovative: Journal Of Social Science Research, 3(5), 351-362.

Jemmy, J., Mokodenseho, S., Yanti, D., Arifannisa, A., & Mu'min, H. (2024). The Influence of Multicultural Education, Cultural Identity, and Political Participation on Minority Rights Awareness in Jakarta. West Science Social and Humanities Studies, 2(01), 68-76.

Jensen-Eriksen, K. (2016). The role of HR analytics in creating data-driven HRM: Textual network analysis of online blogs of HR professionals.

Kurnia, R., Fionasari, R., & Ramdha, T. (2022, December). The Importance of Mechatronic Media in Word Repetition for Early Childhood. In 5th International Conference on Language, Literature, and Education (ICLLE-5 2022) (pp. 325-330). Atlantis Press.

Kurniawan, I., Ichwani, R., Fionasari, R., Batubara, A., & Huda, A. (2022). Indonesia's Renewable Energy Outlook: What to Expect in The Future Renewable Energy of Indonesia. A Brief Review. Elkawnie: Journal of Islamic Science and Technology, 8(2), 298-313.

Lochab, A., Kumar, S., & Tomar, H. (2018). Impact of human resource analytics on organizational performance: A review of literature using R-software. International Journal of Management, Technology And Engineering, 8, 1252-1261.

Lubis, A. F. (2020). Authority for Judicial Determinations in Connection Cases. Pena Justisia: Media Komunikasi dan Kajian Hukum, 19(2).

Lubis, A. F. (2021). The Civil and Military Role Models in Overcoming the Threat of Terrorism. Pena Justisia: Media Komunikasi dan Kajian Hukum, 20(1).

Lubis, A. F. (2022). Efforts to Overcome Juridical Constraints in Countering Terrorism in Indonesia by The Indonesian National Armed Forces. Journal of Social Science, 3(3), 460-468.

Lubis, A. F. (2022). The Application Of Law in The Empowerment of The Defense Area by Using Joint Training Method Between TNI and The Local Government.: 10.2478/bjlp-2022-002112. Baltic Journal of Law & Politics, 15(3), 1614-1626.

Lubis, A. F. (2023). International Law Principles Recognized by Civilized Countries (A Perspective). Jurnal Hukum dan Sosial Politik, 1(1), 32-40.

Lubis, A. F. (2020). THE STATE DETERMINES LEGAL SYSTEM WITH INTERNATIONAL HUMAN RIGHTS INSTRUMENTS. INTERNATIONAL JOURNAL OF MULTI SCIENCE, 1(04), 87-94.

Lubis, A. F. (2020). The Competence of the Judiciary in Cases of Document Forgery Conducted by a TNI Soldier Before Joining TNI. Tabsyir: Jurnal Dakwah dan Sosial Humaniora, 1(3), 01-09.

Margherita, A. (2022). Human resources analytics: A systematization of research topics and directions for future research. Human Resource Management Review, 32(2), 100795.

Mohammed, D. A. Q. (2019). HR analytics: a modern tool in HR for predictive decision making. Journal of Management, 6(3).

Reddy, P. R., & Lakshmikeerthi, P. (2017). HR analytics–an effective evidence based HRM tool. International Journal of Business and Management Invention, 6(7), 23-34.

Saputri, R. D. A., & Nugraha, F. K. (2024). Analysis of the Effect of Tax Rates and Understanding of Taxation on MSME Taxpayer Compliance in Lamongan Regency. Review: Journal of Multidisciplinary in Social Sciences, 1(03), 56-65.

Shet, S. V., Poddar, T., Samuel, F. W., & 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, 311-326.

Sousa, M. J., Pesqueira, A. M., Lemos, C., Sousa, M., & Rocha, Á. (2019). Decision-making based on big data analytics for people management in healthcare organizations. Journal of medical systems, 43, 1-10.

Sousa, M. J. (2018, October). HR analytics models for effective decision-making. In ECMLG 2018 14th European Conference on Management, Leadership and Governance (p. 256). Academic Conferences and publishing limited.

Sucipto, H. (2024). The Impact of Artificial Intelligence (AI) on Human Resource Management Practices. Management Studies and Business Journal (PRODUCTIVITY), 1(1), 138-145.

Syafruddin, S., Agustina, I., Jemmy, J., Komari, K., & Santosa, T. A. (2023). The Effectiveness of IoT-Based Flipped Classroom Model on Students' Critical Thinking Skills: A Meta-Analysis. Jurnal Penelitian Pendidikan IPA, 9(10), 883-891.

Wirges, F., & Neyer, A. K. (2023). Towards a process-oriented understanding of HR analytics: implementation and application. Review of Managerial Science, 17(6), 2077-2108.

Zeidan, S., & Itani, N. (2020). HR analytics and organizational effectiveness. International Journal on Emerging Technologies, 11(2), 683-688.