

## INCREASING EMPLOYEE WORK EFFECTIVENESS THROUGH THE IMPLEMENTATION OF e-HRM IN COMPANIES

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### Abstract

Currently, the use of e-HRM in companies or organizations has become a very important need. Apart from being a necessity, it is also a requirement in winning business competition. The use of e-HRM provides convenience, accuracy and speed in completing work. Literature studies were used in this research to determine the relationship between the use of e-HRM in increasing employee work effectiveness. Previous or relevant research is used to strengthen the foundation of concepts, theories and related phenomena that have an influence on the research variables. A brief explanation of the use of e-HRM in this research is presented through different variations of e-HRM and examines its impact on the performance of private sector employees. The aim of this literature review is to determine the use of e-HRM in increasing employee work effectiveness using the Qualitative Systematic Literature Review (SLR) method by reviewing 10 journals as primary studies. The survey was carried out by following study planning including: Formulating questions, selecting data sources and search strategies, selecting papers, and then executing. In conclusion, employee work effectiveness can be realized with an individual approach to the tasks assigned and support from the company in preparing employee competencies. Training in use and thorough preparation for application implementation are two main aspects and can shape employee work effectiveness.

**Keywords:** Employee, Work Effectiveness, e-HRM.

## I. INTRODUCTION

### Background

One of the factors causing a company's success is the role of Human Resources Management which is well involved and contributes actively in achieving company or organizational goals (Šebestová, J. D., & Popescu, C. R. G., 2022). Every company will be faced with the need to increase operational efficiency in order to maintain its competitive position in the market, especially with many new competitors. The extraordinary development of management information technology today makes competition very tight and achieving goals increasingly complicated. In the era of industrial revolution 4.0 and towards 5.0, the world has experienced major changes in the development of its human resources, especially in completing work in companies, organizations and even governments due to the adoption of new technology (Sulistyaningsih, E., 2023). In this context, the rapid development of information technology has penetrated almost all aspects of human life.

The progress of a company or organization, both short-term and long-term progress, is largely determined by the quality of its human resources (Sinambela, E. A., Darmawan, D., & Mendrika, V., 2022). This is of course in line with the company's increasingly better progress. Therefore, employee skills training must be provided, especially skills so they can master and apply digital applications which are a vital need for companies today (Saniuk, S., Caganova, D., & Saniuk, A., 2023).

Because competition from similar companies is getting stronger, training and human resource development must be carried out in the company (Toan, T. T., 2023). Currently, the world is adopting various types of applications that make it easier for company employees to complete their work more effectively and efficiently (Ammar, M., Haleem, A., Javaid, M., Bahl, S., & Verma, A. S., 2022). Applications are also implemented not only in companies, but also in government agencies (Mikalef, P., Lemmer, K., et al., 2022). Enabling Digital applications are used as a communication link and a means of collaboration between employees or employees which allows them to make the best contribution to the company, organization or agency while maintaining the confidentiality of the

individuals involved in it (Ghelani, D., 2022). The use of digital applications also increases the productivity of employees and enables them to complete their work in a more focused manner (de Assis Dornelles, J., Ayala, N. F., & Frank, A. G., 2022). This research also reveals that the use of social media has now become an important thing in the organizational environment, which aims to increase productivity and achieve performance among employees.

The development of various digital applications has also changed the company's Human Resource Management (HRM) (Jani, A., Muduli, A., & Kishore, K., 2023). Implementing business in depth then forms very significant changes. The use of this technology has also shifted the company's operational paradigm, optimizing work processes and opening up new opportunities in facing increasingly fluctuating market dynamics (Ryketeng, M., & Syachbrani, W., 2023). With adequate capabilities from HRM in carrying out internet-based tasks (e-HRM), work will become more efficient both in terms of material and non-material (Nayak, S., Budhwar, P., Pereira, V., & Malik, A., 2022). Higher levels of productivity and mobility also affect employee effectiveness, where if some work can be assisted by utilizing technology or applications, employees can carry out tasks anytime and anywhere (Madhav, A. S., & Tyagi, A. K., 2022).

Employee work effectiveness or employee work effectiveness refers to the ability and estimation in carrying out tasks, functions, programs, or vision and mission of an organization or company that are adjusted to predetermined targets, including quality, quantity, and time efficiency (Pajrin, Z. N., Syamsuri, A. R., Nasution, L., & Ichsan, R. N., 2022). Individuals can achieve this success through the work approach they apply or by following standard procedures created by the company (Ngoc, N. M., Tien, N. H., & Hieu, V. M., 2023). Optimization can also be triggered through employee training efforts focused on implementing the specified application to provide a deeper understanding of the application's features and functions (Rath, K. C., Khang, A., & Roy, D., 2024). In this way, company employees will be better prepared to face the challenges of using e-HRM, and will be able to utilize the full potential of the application. Furthermore, planned preparation is needed and involves appropriate training, which also plays a major role in building the confidence and skills needed to adapt to technological changes and innovate in an increasingly changing work environment (Safitra, M. F., Lubis, M., & Fakhurroja, H., 2023).

Productivity that is in line with both employees and the company simultaneously using e-HRM appropriately will provide real benefits to employee work effectiveness. (Qamari, i. N., & rakotoarizaka, n. L. P., 2022) entitled Impact of electronic human resource management toward excellent service—A bibliometric review found that organizations will benefit from the use of e-HRM both in terms of cost and time efficiency. , both in organizational and individual scope. Apart from that, e-HRM also facilitates company operations in improving information and performance. Different findings were expressed in (Talukdar, A., & Ganguly, A., 2022) entitled A dark side of e-HRM: mediating role of HR service delivery and HR socialization on HR effectiveness which shows a significant and fully mediating effect Simultaneous human resource services and socialization constitute the relationship between e-HRM and human resource effectiveness. However, e-HRM itself has a strong and significant negative influence on the socialization of human resources.

Furthermore, findings from (Syarief, F., et al., 2023) entitled e-HRM: Changes in Business and Labor Culture in the Digital Paradig show that e-HRM offers significant benefits for the success of an organization, especially in terms of effectiveness and efficiency. E-HRM is intended for workers outside the HR department, as well as management and employees of the organization. Different findings from (Gupta, M., Hassan, Y., Pandey, J., & Kushwaha, A., 2022) entitled Decoding the dark shades of electronic human resource management which shows that there is stratification of the workplace in banking institutions which then being digital natives and digital migrants. This social stratification is based on the adoption and use of technology which then creates problems in the form of hidden knowledge and perceptions of conflict in the workplace. The findings of this study also have important managerial and theoretical implications. This not only expands the current understanding of the transtheoretical model of change, but also has major managerial implications because it highlights the need for implementing e-HRM training curricula that are of course tailored to employees based on their age, work experience, education and skills.

The positive influence of using e-HRM is also in research (Nyathi, M., & Kekwaletswe, R., 2023) entitled Realizing employee and organizational performance gains through electronic human resource management use in developing countries which reveals that even though the use of e-HRM is still new in African countries, however, e-HRM has a positive impact on improving employee and organizational performance. Profits and improvements throughout the organization through the mediation of employee performance. Different research was revealed by (Rana, S., & Kaur, D., 2023) with the title Exploring the challenges and facilitators in the adoption of e-HRM practices in Indian higher education institutions: a qualitative exploration. This research shows the government policies with the demands of accreditation, competition and digital reforms of India as well as the National Education Policy (NEP) 2020, the need regarding electronic human resource management (e-HRM) has increased rapidly in the higher education (HE) sector in India, but the study Literature has revealed that implementation of e-HRM practices in Indian higher education institutions (HEIs) is still in its infancy. So the challenges and facilitators of implementing e-HRM from the Indian higher education sector are still high. This study also has implications for stakeholders in the Higher Education sector, namely HRM practitioners, top executives in the Higher Education sector, education regulators and the government in providing insight into the use of e-HRM.

Research (Kaewkhamnuan, T., & Rotchanakitumnuai, S., 2022) entitled Impact of e-HRM system on employee performance found that user satisfaction is positively influenced by system quality and perceived benefits and there is a positive relationship between perceived benefits and confirmation of expectations. In addition, user satisfaction and service quality are predictors of e-HRM use and information quality is a strong determinant of user satisfaction and e-HRM use. Furthermore, the use of e-HRM has a major influence on employee performance. Meanwhile, other research (Budhwar, P., Malik, A., De Silva, M. T., & Thevisuthan, P., 2022). Entitled Artificial intelligence—challenges and opportunities for international HRM: a review and research agenda reveals that the growth of AI-based applications by increasing HRM functions, has an impact on interesting new research on other topics such as the presence of AI and robotics in social media, the impact of AI applications on outcomes individual and business levels, as well as evaluation of AI enabled HRM practices. The application of this technology has improved the organization of employee work in local and international companies, by providing opportunities for employees and the use of decision making, company resources, and problem solving.

To achieve company goals more optimally with e-HRM, of course companies must prepare their employees to be able to apply this application. This can be done with employee training and development. With training and development, employees with high productivity will be able to complete tasks more quickly than usual. On the other hand, if employees are unable to operate existing technology or applications, then company operations will be affected. Therefore, increasing employee knowledge and skills is the company's target in order to achieve organizational goals.

## **II. RESEARCH METHOD**

The method used in writing this scientific article is literature study by adapting guidelines from the Systematic Literature Review (SLR). SLR is a term used in research methodology or research whose development is carried out to collect and evaluate research related to a certain topic.

The aim of this literature review is to determine the use of e-HRM in increasing employee work effectiveness by reviewing 10 international journals which are primary studies. The references and topics used in this article examine ten articles. Each with a time span from 2022 – 2024. Literature review or literature study is used as a method to collect data and information relevant to the research topic. The process of collecting data and information is carried out by looking for references from previous research from journals related to the research topic.

The use of the SLR method can be done by systematically identifying and reviewing journals where each review follows predetermined steps. This review stage refers to Biolchini's opinion which divides it into three phases, namely; Planning the Study, Formulating the right questions, Selecting appropriate data sources and search strategies, Paper Selection and then Execution. Execution of the search string on the website page was then used as a data source which produced 30 papers which were candidates for primary study. Next, exclusion and inclusion criteria were applied by reading the

abstract and discussion sections of all primary study candidates. The application of the exclusion and inclusion criteria narrowed down 10 primary study papers that met the specified criteria.

### III. RESULTS AND DISCUSSION

#### 3.1. Research Result

**Tabel 1. Taxonomy of analysis results**

| Num. | Author(s)                           | Publication | Research Metode         | Research Result   |
|------|-------------------------------------|-------------|-------------------------|---|
| 1    | Al-Alwan, M., et al.                | 2022        | Quantitative            | The role of the HR department as well as organizational readiness are significant predictors of perceived usefulness of e-HRM and ease of use of e-HRM. Two external factors (the role of the HR department and organizational readiness) were associated with perceived e-HRM utilization and ease of use of e-HRM. These two factors are also related to employees' behavioral intention to use e-HRM, which is significantly related to employee flexibility.                                  |
| 2    | AlHamad, A., et al.                 | 2022        | Quantitative            | E-HRM has a positive impact on organizational health. From the results obtained, the researchers recommend the role of managers and decision makers in telecommunications companies in Jordan to be able to invest in the role of electronic human resource systems, which can help them in a more complex manner aimed at obtaining economic savings and attracting expertise.   |
| 3.   | Adambarage Chamaru De Alwis, et al. | 2022        | Qualitative Methodology | Employees are not skilled with E-HRM applications but are accustomed to utilizing E-HR tools in their daily operations. According to research, HRM places greater emphasis on employees' administrative tasks. The biggest benefit of implementing E-HRM practices is to give HRM freedom from the role of intermediary as well as enable them to focus on strategic planning within the HR organization and transform HR practitioners from administrative paper handlers to strategic planners. |
| 4    | Zhang, J., & Chen, Z.               | 2023        | Qualitative             | Although digital transformation brings benefits for business  |

|   |                             |      |   |   |
|---|-----------------------------|------|---|---|
|   |                             |      |   | development, its potential impacts cannot be ignored, including how the old human resource management system is converted to a new one as well as the negative impacts of the new system.   |
| 5 | Elena Zavyalova, et al.     | 2022 | Quantitative                              | The two main components of digitalization are: quantitative (reach or breadth) and qualitative (effectiveness of digital practices). It was found that the combination of broad reach and high efficiency does not always bode well for a company to be successful and functionally maximal.  |
| 6 | Kuchеров, D., & Tsybova, V. | 2022 | Qualitative Survey                        | The practice of electronic recruitment is positively related to the results of electronic recruitment. However, the use of e-recruitment does not mediate the relationship between e-recruitment practices and e-recruitment outcomes.  |
| 7 | Shamout, M., et al.         | 2022 | Quantitative Structural Equation Modeling | e-HRM practices have a significant influence on SCA. This paper also shows that there is a significant mediating effect of TAM constructs on the relationship between SCA and e-HRM practices. Furthermore, the findings indicate that user satisfaction and e-HRM usage intention do not moderate the relationship between e-HRM-PEOU and PU and SCA pathways.   |
| 8 | Zhou, Y., et al.            | 2022 | Quantitative                              | System usability, user knowledge, organizational resources, and social influence can facilitate e-HRM adoption; Apart from organizational, technological and human resource factors, social factors can also predict e-HRM adoption and have additional validity in predicting e-HRM adoption after controlling for the other three factors. Furthermore, these findings indicate that e-HRM is positively related to overall organizational performance as well as three specific organizational performance categories and that the predictive power of e-HRM for |

|    |                             |      |              |   |
|----|-----------------------------|------|--------------|---|
|    |                             |      |              | organizational performance is significantly greater than that of relational performance and transformational performance and that there is a positive relationship between e-HRM with stronger organizational performance in countries with a greater level of ICT development compared to countries with lower quality of human resources.   |
| 9  | Fenech, R.                  | 2022 | Qualitative  | Human resources management students view that human resource management in the digital era is important for carrying out all traditional roles related to human resource management. However, it is more productive, effective, efficient and agile, as a result of technological literacy and competency in HR analysis.   |
| 10 | Nicolás-Agustín, Á., et al. | 2022 | Quantitative | Human resource practices partially mediate the relationship between digital transformation and strategic alignment. Based on the contingent approach, the author also argues that companies must implement human resource practices by encouraging employee behavior that is consistent with organizational strategy. This alignment of strategic and human resource practices enables companies to achieve digital transformation in search of superior performance. |

From the results of the table above, it can be seen that research from (Al-Alwan, M., et al., 2022) aims to investigate the effect of using e-HRM on employee flexibility using the Davis technology acceptance model. Of the seven hypotheses proposed, there are two external factors, namely the role of the HR department and organizational readiness, which are associated with perceptions of using e-HRM and ease of use, so these two factors are related to behavioral intentions to use e-HRM, which is then related to employee flexibility. All these propositions were accepted through the analysis of data collected through questionnaires from a sample consisting of managers and employees of human resources departments in Islamic banks in Jordan. Another study (AlHamad, A., et al., 2022) aims to examine the impact of E-HRM on organizational health. This research focuses on telecommunications companies operating in Jordan. The results of the research show that E-HRM has a positive impact on the health of the organization. From the results obtained, the researchers recommend managers or decision makers at telecommunications companies in Jordan to invest in electronic human resource systems, which really help them fully implement the expected practices, to obtain economic savings and be able to attract talent.

Adambarage Chamaru De Alwis, et al. (2022) where according to him practitioners or employees have a dual role to achieve organizational goals and functionalities. In today's business



environment, E-HRM Management is an application of Information Technology that has spread widely, and its application is global. The main objective of this research is to determine the effect of the implementation of E-HRM in Sri Lanka on the development of HRM functions. By comparing the theory with the findings during the analysis, the researcher then discovered that Human Resources was not familiar with the use of E-HRM applications but still used E-HR tools in their daily operations. According to this research, Human Resources places more emphasis on administrative tasks. Researchers also revealed that the biggest benefit of implementing E-HRM practices is that it frees HRM from the role of intermediary and allows them to focus on strategic planning within the HRM organization as well as changing HRM practitioners from administrative paper handlers to more strategic planners. Another research, namely (Zhang, J., & Chen, Z., 2023) with the aim of the research is to explore how HRM can transform digitally in the function of the digital economy. The direction, drivers and impact of HRM digital transformation are the main content of the study. This study concluded that of the five factors of digital needs, including; Internal customers, industry digital innovation, digital innovation governance, competitor challenges, and the needs of the digital era can drive HRM's digital transformation. It analyzes the essence of HRM digital transformation, such as digital workplace, digital employee services, and digital HRM management processes. Furthermore, this study also shows that the digital HRM management process refers to the implementation of selection, training and development functions, including assessment using the most advanced digital technology. However, although digital transformation brings important benefits to business development, its impact cannot be ignored, including the conversion of old and new HRM management systems as well as the negative impacts of the changed systems.

Research results from Elena Zavyalova, et al. (2022) explained that digital transformation of people in HRM management has become very important in the context of the COVID-19 pandemic and has significantly accelerated the rate of digitalization of HRM processes. Companies that are quicker to seize opportunities implemented digitally put themselves in a better position compared to current technology. At the same time, the consequences and factors of digitalization of HRM management, as well as its relationship with corporate systems, remain unclear to date. This research also provides information to explain HRM digitalization component solutions by analyzing important characteristics in organizations such as; size, staff turnover, personnel structure and performance using data from 449 small, medium and large businesses operating in the Russian market. From the data collected, it shows that the two main components of digitalization, namely quantitative (breadth or reach) and qualitative (effectiveness of digital practices), found that the combination of a wide reach with high efficiency is not always a good sign for a company to be successful. Research from (Kuchеров, D., & Tsybova, V., 2022) where the research objective is to investigate the impact of electronic recruitment practices on recruitment results in Russian companies. The research design/methodology or approach uses quantitative methods based on a survey of a sample covering 449 companies in Russia. As a result, it was found that electronic recruitment practices were positively related to electronic recruitment results. However, the use of e-recruitment does not mediate the relationship between e-recruitment practices themselves and e-recruitment outcomes.

Research from Shamout, M., et al., (2022) seeks to investigate the impact of e-HRM Management practices on achieving Sustainable Competitive Advantage (SCA) in the context of the Jordanian Industrial Sector (JIS) as well as identifying the mediating role of perceived usefulness (PU) e-HRM. ) and Perceived Ease of Use of e-HRM (PEOU). Then, this research investigates the role of the moderating variables of User Satisfaction and Continuous Use Intention of e-HRM. The questionnaire was returned and validated based on the Census method with a response rate of around (82%). The results of this study indicate that e-HRM practices have a significant influence on SCA. This research also concludes that there is a significant mediating effect of the TAM construct on e-HRM practices as well as SCA. However, user satisfaction and intention to use e-HRM were proven not to moderate the relationship between e-HRM-PEOU and PU and SCA pathways. Meanwhile, the results of research (Zhou, Y., et al., 2022) which uses information technology, shows that more and more companies are adopting a digital approach to e-HRM management. The research results show that system usability, HRM, user knowledge, and social influence can facilitate the implementation of e-HRM; Apart from organizational, technological and human resource factors. Social factors can also

estimate e-HRM adoption which has additional validity in predicting e-HRM use after controlling for the other three factors. This research also shows that e-HRM is positively related to overall organizational performance, three specific organizational performance categories, and that the predictive power of e-HRM through organizational operational performance is significantly better than relational performance and also transformational performance. In addition, this research also shows that there is a positive relationship between e-HRM and organizational performance that is stronger in countries with a higher level of ICT development than in countries with lower HRM quality.

Research from Fenech, R. (2022) where the exploratory research is to investigate how undergraduate HRM students view HRM in the digital era. The contribution of this research is to explore the perceptions of future generation HRM regarding the new role of human resource management in the digitally transformed workforce. The qualitative research method analyzed two groups with 20 participants in each group. The conclusion obtained from this research is that HRM resources in the digital era are very important for carrying out traditional roles related to HRM, but with a more effective, efficient, agile and productive scope as a result of technological literacy and competence. Likewise, research (Nicolás-Agustín, Á., et al., 2022) aims to enable professionals and academics to know the human resource practices needed in the digital revolution and Industry 4.0 environment. The research results show that HRM is the main asset in the digital transformation process but strategic alignment is needed so that company goals can be achieved. With a representative sample of 184 manufacturing companies with ten or more employees located in southeastern Spain, using partial least squares. It was found that human resource practices partially mediate the relationship between strategic adjustment and digital transformation. Also that companies must implement appropriate human resource practices to encourage employee behavior that is consistent with the organization's established strategy. The alignment of the two enables companies to achieve digital transformation in search of superior performance. This research also reveals that the mediating role of HRM, where practices such as teamwork, remote work, and employee involvement are very important to encourage innovative behavior let alone implement digital transformation processes.

Overall, the implementation of e-HRM in various aspects of work has been proven to have a significant impact in increasing employee work effectiveness. The level of influence of e-HRM on employee work effectiveness varies, depending on the company's readiness to adopt, implement and develop the application. The success of e-HRM implementation also depends on employees' understanding, habits and skills in implementing the application within the company so that maximum targets can be achieved.

### **3.2. Discussion**

Based on reference journals (Al-Alwan, M., et al., 2022), (AlHamad, A., et al., 2022), (Adambarage Chamaru De Alwis, et al., 2022), (Shamout, M., et al., 2022), (Zhou, Y., et al., 2022), (Fenech, R., 2022), shows that the level of employee work effectiveness is in accordance with their ability to complete work in accordance with company goals. The results of this optimization are in line with employee credibility which is adjusted to the standards provided by the company. If employee productivity is in line with the company's vision and mission, as well as the changes that occur, then the level of employee effectiveness is said to be good. The methods set by the company to achieve goals certainly have a big influence on employee productivity at work. By changing methods from old or manual methods to technology-based methods, of course employees can work well, effectively and efficiently. One way to utilize technology in the world of work is by implementing e-HRM in companies.

This applications aims to help employees complete their work well. The function of implementing this application also suits its purpose. If the user can apply it well, of course with previous training and development, also balanced with preparation for the implementation so that it can run well later, because several reference articles (Zhang, J., & Chen, Z., 2022), that even though the transformation digital brings benefits to business development, but its potential impacts cannot be ignored, including how to convert old human resource management systems to new ones as well as



the negative impacts of new systems. Other research, namely (Elena Zavyalova, et al., 2022), (Kuchеров, D., & Tsybova, V., 2022), revealed that the use of e-HRM is not always appropriate for companies to use for effectiveness and efficiency as well as the company's expected results. Other research, namely (Nicolás-Agustín, Á., et al., 2022) states that to achieve the goals of companies implementing digital transformation, it is very important to align the technology used with the knowledge and skills of employees.

Human resource practices partially mediate the relationship between digital transformation and strategic alignment. Based on the contingent approach, the author also argues that companies must implement human resource practices by encouraging employee behavior that is consistent with organizational strategy. This alignment of strategic and human resource practices enables companies to achieve digital transformation in search of superior performance.

Overall, based on the reference article, e-HRM has an important role in building good employee work effectiveness of individuals who apply it, because the application of e-HRM can trigger faster brain work as well as energy and time efficiency in completing tasks, for the effect of implementing e-HRM The HRM perceived by employees still depends on their understanding of the application. The higher the knowledge and experience regarding the application used, the maximum the results achieved will be.

## **IV. CLOSING**

### **4.1. Conclusion**

Based on the review of the literature that has been carried out by researchers, several conclusions can be drawn, including the following:

Developing technology has a very important role in the world of work, especially in the 4.0 to 5.0 era like now. Companies must be able to keep up with the latest technological developments in order to remain efficient, competitive and optimally achieve business goals. The use of digital applications or e-HRM is a very important form of work digitalization. These applications maximize employee tasks, completing tasks more accurately, quickly and on time. However, what must be paid attention to is that the use of digital applications in order to encourage high work effectiveness from employees must be accompanied by an understanding and appropriate use of the individual. Application readiness related to maintenance and development is also important so that the work process continues to run smoothly. The application of e-HRM is a means of increasing the competence of private employees through training and thorough preparation for the use of the application.

The latest developments in techniques for creating management information systems cover various aspects, namely developments in development methodology, technology, development methodology, as well as trends in system design that enable visible improvements in developments: Internet of Things (IoT), Artificial Intelligence (AI) , Cloud Computing, Data Analytics, Rapid Development Methodology, Microservices Based Development, Information Security, User Interface (UI/UX) and Automation Systems.

The conclusion is that the work effectiveness of company or organization employees can be realized through synergy between employees who understand and are able to use e-HRM applications well, and companies that are ready to maintain the application and develop it. If these two things are prepared well, the benefits of using e-HRM can be maximized in helping to increase employee work effectiveness and can also encourage the achievement of company goals more optimally.

### **4.2. Suggestion**

It is hoped that the results obtained in writing this scientific work can become input for companies and organizations and even government agencies in encouraging increased employee work effectiveness. Then, it is also hoped that this article can become a source of knowledge for students, the community, business people in developing their human resources and for the government in improving the performance of its employees. And future researchers can conduct surveys with more and more varied studies so that more information can be obtained.

## **BIBLIOGRAPHY**

- Al-Alwan, M., Bader, D., Al-Qatawneh, M., Alneimat, S., & Al-Hawary, S. (2022). E-HRM and employee flexibility in Islamic banks in Jordan. *International Journal of Data and Network Science*, 6(3), 703-710.
- Ammar, M., Haleem, A., Javaid, M., Bahl, S., & Verma, A. S. (2022). Implementing Industry 4.0 technologies in self-healing materials and digitally managing the quality of manufacturing. *Materials Today: Proceedings*, 52, 2285-2294.
- Budhwar, P., Malik, A., De Silva, M. T., & Thevisuthan, P. (2022). Artificial intelligence—challenges and opportunities for international HRM: a review and research agenda. *The International Journal of Human Resource Management*, 33(6), 1065-1097.
- De Alwis, A. C., Andrić, B., & Šostar, M. (2022). The Influence of E-HRM on modernizing the role of HRM context. *Economies*, 10(8), 181.
- De Assis Dornelles, J., Ayala, N. F., & Frank, A. G. (2022). Smart Working in Industry 4.0: How digital technologies enhance manufacturing workers' activities. *Computers & Industrial Engineering*, 163, 107804.
- Fenech, R. (2022). HUMAN RESOURCE MANAGEMENT IN A DIGITAL ERA THROUGH THE LENS OF NEXT GENERATION HUMAN RESOURCE MANAGERS. *Journal of Management Information & Decision Sciences*, 25.
- Ghelani, D. (2022). Digital Educational Coordination System (DECS).
- Gupta, M., Hassan, Y., Pandey, J., & Kushwaha, A. (2022). Decoding the dark shades of electronic human resource management. *International Journal of Manpower*, 43(1), 12-31.
- Jani, A., Muduli, A., & Kishore, K. (2023). Human resource transformation in India: examining the role digital human resource technology and human resource role. *International Journal of Organizational Analysis*, 31(4), 959-972.
- Kuchеров, D., & Tsybova, V. (2022). The contribution of e-recruitment practices to e-recruitment outcomes in Russian companies. *Measuring Business Excellence*, 26(3), 366-377.
- Kaewkhamnuan, T., & Rotchanakitumnuai, S. (2022). Impact of e-HRM system on employee performance.
- Madhav, A. S., & Tyagi, A. K. (2022). The world with future technologies (Post-COVID-19): open issues, challenges, and the road ahead. *Intelligent Interactive Multimedia Systems for e-Healthcare Applications*, 411-452.
- Mikalef, P., Lemmer, K., Schaefer, C., Ylinen, M., Fjørtoft, S. O., Torvatn, H. Y., ... & Niehaves, B. (2022). Enabling AI capabilities in government agencies: A study of determinants for European municipalities. *Government Information Quarterly*, 39(4), 101596.
- Nayak, S., Budhwar, P., Pereira, V., & Malik, A. (2022). Exploring the dark-side of E-HRM: a study of social networking sites and deviant workplace behavior. *International Journal of Manpower*, 43(1), 89-115.
- Ngoc, N. M., Tien, N. H., & Hieu, V. M. (2023). Enhancing efficiency of real estate brokerage activities in Vietnam. *International journal of business and globalisation*.
- Nicolás-Agustín, Á., Jiménez-Jiménez, D., & Maeso-Fernandez, F. (2022). The role of human resource practices in the implementation of digital transformation. *International Journal of Manpower*, 43(2), 395-410.
- Nyathi, M., & Kekwaletswe, R. (2023). Realizing employee and organizational performance gains through electronic human resource management use in developing countries. *African Journal of Economic and Management Studies*, 14(1), 121-134.
- Pajrin, Z. N., Syamsuri, A. R., Nasution, L., & Ichsan, R. N. (2022). The Influence of the Wage System, Work Environment and Welfare Benefits on Employee Work Productivity of PT. Samawood Utama Work Industries Tanjung Morawa, Deli Serdang, North Sumatra. *International Journal of Business, Technology and Organizational Behavior (IJBTOB)*, 2(6), 646-656.
- Rath, K. C., Khang, A., & Roy, D. (2024). The Role of Internet of Things (IoT) Technology in Industry 4.0 Economy. In *Advanced IoT Technologies and Applications in the Industry 4.0 Digital Economy* (pp. 1-28). CRC Press.

- Ryketeng, M., & Syachbrani, W. (2023). Optimising Human Resources Capacity: Driving Adoption of Latest Technology and Driving Business Innovation amidst the Dynamics of the Digital Era. *Journal of Contemporary Administration and Management (ADMAN)*, 1(3), 229-236.
- Safitra, M. F., Lubis, M., & Fakhurroja, H. (2023). Counterattacking cyber threats: A framework for the future of cybersecurity. *Sustainability*, 15(18), 13369.
- Saniuk, S., Caganova, D., & Saniuk, A. (2023). Knowledge and skills of industrial employees and managerial staff for the industry 4.0 implementation. *Mobile Networks and Applications*, 28(1), 220-230.
- Šebestová, J. D., & Popescu, C. R. G. (2022). Factors influencing investments into human resources to support company performance. *Journal of Risk and Financial Management*, 15(1), 19.
- Shamout, M., Elayan, M., Rawashdeh, A., Kurdi, B., & Alshurideh, M. (2022). E-HRM practices and sustainable competitive advantage from HR practitioner's perspective: A mediated moderation analysis. *International Journal of Data and Network Science*, 6(1), 165-178.
- Sinambela, E. A., Darmawan, D., & Mendrika, V. (2022). Effectiveness of Efforts to Establish Quality Human Resources in the Organization. *Journal of Marketing and Business Research (MARK)*, 2(1), 47-58.
- Sulistyaningsih, E. (2023). Improving Human Resources Technology Innovation as a Business Growth Driver in the Society 5.0 Era. *ADI Journal on Recent Innovation*, 4(2), 149-159.
- Syarief, F., Nindiasari, H., Martanto, M., Febriani, B., & Wujarso, R. (2023). e-HRM: Changes in Business and Labor Culture in the Digital Paradigm. *International Journal of Artificial Intelligence Research*, 6(1.1).
- Talukdar, A., & Ganguly, A. (2022). A dark side of e-HRM: mediating role of HR service delivery and HR socialization on HR effectiveness. *International Journal of Manpower*, 43(1), 116-147.
- Toan, T. T. (2023). Opportunities and challenges for quality of human resource in public sector of Vietnam's logistics industry. *International journal of public sector performance management*.
- QAMARI, I. N., & RAKOTOARIZAKA, N. L. P. (2022). Impact of electronic human resource management toward excellent service—A bibliometric review. *Expert Journal of Business and Management*, 10(1).
- Zavyalova, E., Sokolov, D., Kuchеров, D., & Lisovskaya, A. (2022). The digitalization of human resource management: Present and future. *Foresight and STI Governance*, 16(2), 42-51.
- Zhang, J., & Chen, Z. (2023). Exploring Human Resource Management Digital Transformation in the Digital Age. *Journal of the Knowledge Economy*, 1-17.
- Zhou, Y., Cheng, Y., Zou, Y., & Liu, G. (2022). e-HRM: A meta-analysis of the antecedents, consequences, and cross-national moderators. *Human resource management review*, 32(4), 100862.