

HUMAN RESOURCE MANAGEMENT STRATEGY TO INCREASE ECONOMIC PRODUCTIVITY IN THE DIGITAL ERA

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Abstract

Effective human resource management strategies in the digital era play a crucial role in increasing economic productivity. This article discusses the importance of digital skills development, work culture transformation, and technology adoption in HR management. Investment in digital training enables the workforce to stay relevant to market needs, while an innovative and flexible work culture drives productivity and work-life balance. In addition, the use of technologies such as human resource management systems and data analytics provides significant operational efficiencies. Implementing these strategies also requires adaptive leadership that is able to inspire teams and encourage cross-functional collaboration. While there are challenges, such as skills gaps and technology access, a holistic approach involving various stakeholders can help overcome these obstacles. This article concludes that digital-based human resource strategies not only increase organizational competitiveness but also have a positive impact on society, create more inclusive employment opportunities, and drive sustainable economic growth.

Keywords: Human resource management, economic productivity, digital era

INTRODUCTION

In the digital era, according to Fadillah et al., (2024) advances in information technology have brought significant changes in various aspects of life, including in the world of work and human resource management. Digitalization has changed the way organizations operate, interact, and

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innovate. This transformation provides great opportunities to increase economic productivity, but also demands adaptive, innovative, and future-oriented human resource management strategies.

According to Balouei Jamkhaneh et al., (2022) one of the most obvious impacts of the digital era is the automation and integration of technology into business processes. Technologies such as artificial intelligence, big data, cloud computing, and the Internet of Things (IoT) enable organizations to increase operational efficiency and accelerate decision-making. However, these advances also bring new challenges, such as the need to develop new skills among the workforce, deal with job disruption, and ensure digital inclusion for all levels of society.

This digital transformation requires organizations to develop human resource management strategies that are able to meet the needs of the times. On the other hand, the workforce in the digital era faces the challenge of continuously improving their competencies in order to remain relevant in an increasingly competitive job market. A report from the World Economic Forum (2023) states that 50% of the global workforce will need to reskill or upskill to meet future job demands. Thus, organizations are not only responsible for leveraging technology, but also ensuring their workforce has the appropriate skills to support economic productivity (Amalia, 2024).

An effective human resource management strategy in the digital era needs to consider three main aspects: developing digital competencies, creating a work environment that supports innovation, and adapting to organizational change. First, developing digital competencies is a priority to ensure that the workforce has the ability to utilize the latest technology. This includes training in data analytics, programming, cybersecurity, and the ability to work in a digital ecosystem (Zhang, J., & Chen, 2024).

Second, creating a work environment that supports innovation requires an approach that encourages collaboration, flexibility, and creativity. Organizations must be able to build a work culture that motivates employees to contribute optimally, one of which is by utilizing collaboration technologies such as project management platforms or cloud-based communication applications. This approach also includes providing work flexibility, such as remote working or hybrid working policies, which have been proven to increase productivity in various sectors.

Third, adapting to organizational change involves the ability to manage change effectively. In this case, change management is key to ensuring a smooth transition to the digital era. This includes transparent communication,

employee involvement in the decision-making process, and managing resistance to change. Organizations that successfully manage change will be better prepared to face challenges and opportunities in the digital era (Arief et al., 2021).

High economic productivity can only be achieved through synergy between technology and workforce. Therefore, human resource management strategies in the digital era must be designed to improve human capabilities as the organization's main asset. This is also in line with the concept of a knowledge-based economy, where productivity and economic growth are highly dependent on the quality and competence of human resources. In addition, the digital era also requires organizations to be more inclusive in managing human resources. Diversity in the workforce, including in terms of gender, age, and cultural background, must be used as a strength. Research shows that organizations with a diverse workforce tend to be more innovative and able to face challenges more effectively. Therefore, human resource management strategies must include policies that support diversity and inclusion (Mazurchenko, A., & Maršíková, 2019).

Amid the opportunities and challenges of the digital era, the role of leadership is becoming increasingly important. Organizational leaders must be able to become agents of change who inspire and motivate employees to achieve their best potential. Visionary and adaptive leadership will help organizations stay competitive and relevant amidst the dynamics of the global market. In the Indonesian context, digitalization provides a great opportunity to increase national economic productivity. The government, through various programs, such as the National Digital Literacy Movement and technology-based vocational training programs, has attempted to support this transformation. However, the success of these initiatives is highly dependent on collaboration between the public, private, and community sectors in implementing effective human resource management strategies (Chytiri, 2019).

RESEARCH METHOD

The method used in this study is a literature review, which aims to analyze and synthesize various sources of information relevant to the topic of human resource management strategies in the digital era. The literature review was conducted by collecting secondary data from various sources, such as scientific journals, books, research reports, and related articles published in recent years. This approach allows researchers to understand the latest trends,

challenges, and opportunities faced in human resource management in the digital era.

The literature review process includes several stages, namely identification of relevant literature sources, evaluation of source quality, and analysis of key findings. In this analysis, researchers focus on strategic issues such as the development of digital competence, the application of technology in human resource management, and the importance of inclusion and diversity in the workplace. The results of this study are expected to provide in-depth insights that support the development of effective and adaptive human resource management strategies to increase economic productivity in the digital era.

RESULT AND DISCUSSION

Definition and Role of Human Resources in Economic Productivity in the Digital Era

According to Akaev, A. A., & Sadovnichii, V. A. (2021), human resources are individuals who have the ability, knowledge, skills, and potential to contribute to achieving certain goals in organizations and society. In an economic context, human resources are a very important element because they are the main driver in the production, distribution, and management of various resources. In the digital era, this definition has grown by including elements of technological capability, adaptability to change, and creativity as core competencies required.

Economic productivity itself is defined as the level of efficiency in producing goods and services needed by society. In the digital era, economic productivity does not only rely on traditional factors such as physical capital and raw materials, but also depends on the use of technological innovation. The presence of digital technology, such as artificial intelligence, automation, and data analytics, is changing the way of working in various economic sectors. This requires human resources to not only carry out routine tasks, but also to be able to utilize technology optimally to increase work efficiency and effectiveness (Kaufman et al., 2021).

In the digital economy ecosystem, the role of human resources is becoming increasingly strategic. Human resources are the driving force behind technological innovation that is the backbone of economic development. With relevant expertise, human resources can create and implement technological solutions that increase productivity across various business lines. In addition, human resources also play a key role in managing digital transformation, which is the process of adapting an organization to new technologies. This

transformation often involves major changes in organizational structure, work processes, and work culture. Therefore, adaptive human resources with good managerial skills are essential to ensure that the transformation runs smoothly (Samoilovych et al., 2022).

The digital era also requires human resources to continue to develop new skills. The demand for expertise in programming, data analysis, cloud system management, and other skills relevant to digital technology is increasing. Continuous training and technology-based education are key to meeting this need. By having a skilled workforce, a country or organization can increase its competitiveness in the global market (Hao et al., 2023). In addition, human resources also act as a liaison between systems in a complex digital ecosystem. In the modern work environment, many systems are interconnected and require cross-disciplinary collaboration. Human resources who are able to understand the interactions between these systems can ensure effective integration, which ultimately supports overall productivity.

However, the strategic role of human resources in the digital era is not free from various challenges. One of the main challenges is the skills gap which is still a problem in many countries. Many workers do not yet have the skills that match the needs of the digital era. This requires significant investment in training and education so that the workforce can meet the demands of the ever-changing market. In addition, digital inequality is also a major challenge, especially for remote areas with minimal access to technology and training. To overcome this, collaboration between the government, private sector, and society is needed to expand access to quality technology and education. Another challenge that is no less important is adaptation to change. Rapid change often creates resistance, both among individuals and organizations. Therefore, building a flexible work culture and providing psychological support to the workforce are important steps to help them adapt to the changes that occur. Overall, human resources are an irreplaceable element in efforts to increase economic productivity in the digital era. By optimally utilizing technology, developing relevant skills, and managing change well, human resources can become the main driver of sustainable economic growth (Growiec, 2018). Therefore, investment in human resource development should be a top priority for governments, companies and communities to create a competitive and inclusive economic ecosystem.

Digital Technology and the Impact of Technological Transformation in the World of Work

Digital technology has become a major factor driving major changes in various aspects of life, including the world of work. Rapidly evolving technological transformations create new opportunities as well as complex challenges for organizations, workers, and society as a whole. The presence of technologies such as artificial intelligence, data analytics, automation, and cloud-based systems has fundamentally changed the way work is done, affecting various economic sectors, and creating a new paradigm in the world of work (Kaivo-Oja et al., 2017).

One of the most significant impacts of digital technology is increased efficiency and productivity. Companies can now automate processes that previously required a lot of time and human effort. With the help of robotics and automation software, routine tasks can be completed more quickly, accurately, and cost-effectively. This allows the workforce to shift their focus to work that requires creativity, innovation, and complex problem solving. As a result, organizational productivity increases significantly, thereby accelerating overall economic growth (Cascio, W. F., & Montealegre, 2016).

In addition, digital technology has opened up opportunities for greater work flexibility. The concept of remote working, once considered an alternative, has now become the new norm in many industries. With digital collaboration tools such as Zoom, Microsoft Teams, and Slack, employees can work from anywhere without losing productivity. This change not only provides convenience for workers but also allows companies to access the best talent from various regions without geographical boundaries. This flexibility, if managed well, can improve the balance between personal and professional life, thereby driving higher job satisfaction.

However, technological transformation does not come without its challenges. One of the biggest challenges is the risk of job loss due to automation. Jobs that rely on manual or repetitive tasks are more vulnerable to being replaced by machines or algorithms. This condition raises an urgent need to develop new skills that are relevant to the digital era. Education and retraining are key elements in ensuring that the workforce can continue to adapt to these changes. Organizations and governments have a big responsibility to provide training programs that are in line with the needs of the evolving labor market (Goos et al., 2019).

In addition to the challenge of job loss, technological transformation also creates digital inequality. Not all individuals or organizations have equal access to advanced technology. Differences in infrastructure, education levels, and financial resources often act as barriers for many parties to make optimal use

of technology. These inequalities not only exacerbate socio-economic disparities but can also hinder overall economic growth. Therefore, there needs to be a collective effort to expand access to technology, improve digital literacy, and create a more inclusive work ecosystem (Baptista et al., 2020).

Technological transformations also have an impact on the relationship between workers and employers. With the increasing use of data analytics and digital monitoring tools, companies can now track employee performance in more depth. While these technologies can help improve productivity and efficiency, there are concerns about privacy and psychological distress that workers may experience. Therefore, it is important for organizations to ensure that technology is used ethically and considers employee well-being as a top priority.

On the other hand, digital technology also opens up huge opportunities for innovation and new value creation. With access to advanced tools such as artificial intelligence and blockchain, companies can develop more efficient and sustainable business models. In the healthcare sector, for example, telemedicine allows doctors to consult patients without having to meet in person. Meanwhile, in the education sector, online learning platforms provide opportunities for more individuals to improve their skills, without being limited by location or time.

These changes also have major implications for leadership in the digital era. Leaders must have the ability to understand technology, manage change effectively, and create a work culture that supports innovation. They must also be able to build trust with employees amidst rapid change, while ensuring that the organization remains competitive in facing global challenges (Fossen, F., & Sorgner, 2019).

Overall, digital technology has fundamentally changed the world of work, creating opportunities and challenges that require strategic and adaptive responses. By using technology wisely, addressing digital inequality, and investing in workforce skills development, this transformation can be a catalyst for inclusive and sustainable economic growth. The future of work will increasingly be marked by the integration of people and technology, where collaboration between the two is key to creating greater value and innovation.

Proven Effective Human Resource Strategies in the Digital Era to Increase Economic Productivity

In the digital era, the strategic role of human resources is more important than ever in driving economic productivity. With technology continuing to advance, organizations are faced with the challenge of adapting while taking advantage of new opportunities offered by digitalization (Halid et al., 2022). In this context, an effective human resource strategy is not only about workforce management, but also involves skills development, creating an innovative work culture, and implementing technology to optimize human potential.

One key strategy that has proven effective is investing in digital skills development. With rapid technological advances, the need for a workforce with specialized expertise in the digital field is increasing. Training and skills development, both through internal company programs and collaboration with educational institutions, are important steps to ensure that the workforce remains relevant to market needs. Continuing education focused on technologies such as data analytics, artificial intelligence, and cloud system management can help organizations maintain competitiveness while increasing productivity (Brynjolfsson, E., & McAfee, 2011).

In addition, the transformation of work culture is a key element in human resource strategies in the digital era. Organizations need to create a work environment that supports innovation, collaboration, and flexibility. In the midst of rapid change, adaptability is an important value that must be embedded in the work culture. Employees who feel supported to innovate and adapt tend to be more productive and engaged in efforts to achieve company goals. Digital technology also allows for the implementation of more flexible work models, such as remote work, which can improve the balance between employees' personal and professional lives (Hidayat, M., & Basuil, 2024).

The use of technology in human resource management is also an effective strategy. A technology-based human resource management system allows companies to automate administrative processes, such as payroll, recruitment, and performance evaluation (Tripathi, R. T., & SINGH, 2017). Thus, time and resources can be allocated to more strategic activities. In addition, analytical technology allows organizations to identify trends, monitor performance, and design more targeted development programs. For example, data analytics can be used to identify high-potential employees who can be promoted or need additional training.

On the other hand, the success of a human resource strategy also depends on adaptive leadership. Leaders in the digital era must have the ability to inspire and motivate teams, while understanding relevant technologies to support business strategies. They also need to build effective communication

to explain the company's vision and overcome resistance to change. Transparent and inclusive leadership will help build trust among employees, which ultimately contributes to organizational productivity. In addition, cross-functional collaboration and technology integration are important elements in increasing economic productivity. Organizations need to encourage collaboration between different teams to create innovative solutions that support business growth. For example, new product development involving marketing, technology, and operations teams can result in services that are more relevant to market needs. Digital technologies, such as online collaboration platforms, can accelerate this process by enabling teams to work together efficiently even though they are in different locations (Hernandez et al., 2016).

However, the implementation of human resource strategies in the digital era is not without challenges. One of the main challenges is the skills gap between organizational needs and workforce capabilities. To overcome this, a holistic approach is needed that involves all stakeholders, including the government, companies, and educational institutions. National-scale training programs, incentives for skills development, and adequate policy support can help narrow this gap. Inequality in access to technology is also an obstacle to implementing an effective human resource strategy. Not all organizations, especially small and medium enterprises, have the resources to adopt digital technology. In this situation, collaboration between the public and private sectors can be a solution to expand access to technology and support inclusive digital transformation (Agustian et al., 2023). Overall, an effective human resource strategy in the digital era focuses on skills development, work culture transformation, technology utilization, and adaptive leadership. By adopting a comprehensive and inclusive approach, organizations can increase economic productivity while creating an innovative and sustainable work environment. This transformation benefits not only companies but also society as a whole, through the creation of better jobs and increased economic welfare.

CONCLUSION

A well-designed human resource management strategy in the digital era can be a major driver of increased economic productivity. By prioritizing digital skills development, organizations are able to meet the challenges of changing technologies while capitalizing on opportunities. Training focused on advanced technology skills, such as artificial intelligence and data analytics, enables the

workforce to remain relevant and productive in a competitive work environment.

Transforming work culture to support innovation, collaboration, and flexibility is also a key element of this strategy. Flexible work models not only improve employee life balance but also enable companies to attract and retain the best talent. Meanwhile, adopting technology to manage human resources provides significant operational efficiencies, allowing organizations to allocate resources to more strategic activities.

Ultimately, the success of a human resource strategy in the digital era depends on adaptive and inclusive leadership, as well as collaboration between the public and private sectors to address the challenges of the technology gap. With a holistic and sustainable approach, digital transformation not only increases economic productivity but also creates a broad positive impact on society.

REFERENCES

- Agustian, K., Pohan, A., Zen, A., Wiwin, W., & Malik, A. J. (2023). Human resource management strategies in achieving competitive advantage in business administration. *Journal of Contemporary Administration and Management (ADMAN)*, 1(2), 108-117.
- 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.
- Akaev, A. A., & Sadovnichii, V. A. (2021). The human component as a determining factor of labor productivity in the digital economy. *Studies on Russian Economic Development*, 32, 29-36.
- Arief, A. S., Pattiasina, P. J., & Remus, S. P. (2021). Relevance of human resource management on small business objective in digital era: A critical review of research evidence. *International Journal of Social Sciences and Humanities*, 5(2), 79-91.
- Balouei Jamkhaneh, H., Shahin, A., Parkouhi, S. V., & Shahin, R. (2022). The new concept of quality in the digital era: a human resource empowerment perspective. *The TQM Journal*, 34(1), 125-144.
- Baptista, J., Stein, M. K., Klein, S., Watson-Manheim, M. B., & Lee, J. (2020). Digital work and organisational transformation: Emergent Digital/Human work configurations in modern organisations. *The Journal of Strategic Information Systems*, 29(2), 101618.

- Brynjolfsson, E., & McAfee, A. (2011). *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Brynjolfsson and McAfee.
- Cascio, W. F., & Montealegre, R. (2016). How technology is changing work and organizations. *Annual review of organizational psychology and organizational behavior*, 3(1), 349-375.
- Chytiri, A. P. (2019). Human resource managers' role in the digital era. *SPOUDAI-Journal of Economics and Business*, 69(1-2), 62-72.
- Fadillah, Z. I., Freitas, C., & Lopes, C. (2024). The Important Role Of Human Resource Management (Hr) In Addressing The Challenges Of The Digital Era And Improving Societal Well-Being. *JMEB Jurnal Manajemen Ekonomi & Bisnis*, 2(01), 19-23.
- Fossen, F., & Sorgner, A. (2019). Mapping the future of occupations: transformative and destructive effects of new digital technologies on jobs. *Форсајм*, 13(2 (eng)), 10-18.
- Goos, M., Arntz, M., Zierahn, U., Gregory, T., Gomez, S. C., Vazquez, I. G., & Jonkers, K. (2019). *The impact of technological innovation on the future of work* (No. 2019/03). JRC working papers series on Labour, Education and Technology.
- Growiec, J. (2018). The digital era, viewed from a perspective of Millennia of economic growth.
- Halid, H., Halim, S. N. A., & Ravesangar, K. (2022). Human resource management practices in the digital era. In *Technological Challenges: The Human Side of the Digital Age* (pp. 109-158). Cham: Springer International Publishing.
- Hao, X., Wen, S., Xue, Y., Wu, H., & Hao, Y. (2023). How to improve environment, resources and economic efficiency in the digital era?. *Resources Policy*, 80, 103198.
- Hernandez, K., Faith, B., Prieto Martín, P., & Ramalingam, B. (2016). The impact of digital technology on economic growth and productivity, and its implications for employment and equality: An evidence review.
- 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.
- Kaivo-Oja, J., Roth, S., & Westerlund, L. (2017). Futures of robotics. Human work in digital transformation. *International Journal of Technology Management*, 73(4), 176-205.
- Kaufman, N., Khadasevich, N., Glushchenko, M., Zelentsova, S., Sergeeva, I., & Imamverdieva, M. (2021, March). Prospects for the Development of

- Human Resources in the Digital Economy Era. In *VIII International Scientific and Practical Conference 'Current problems of social and labour relations' (ISPC-CPSLR 2020)* (pp. 316-321). Atlantis Press.
- Mazurchenko, A., & Maršíková, K. (2019). Digitally-powered human resource management: Skills and roles in the digital era. *Acta Informatica Pragensia*, 8(2), 72-87.
- Samoilovych, A., Popelo, O., Kychko, I., Samoilovych, O., & Olyfirenko, I. (2022). Management of human capital development in the era of the digital economy. *J. Intell. Manag. Decis*, 1(1), 56-66.
- Tripathi, R. T., & SINGH, P. K. (2017, March). A study on innovative practices in digital human resource management. In *Proceedings of the National Conference "Digital transformation of business in India: Opportunities and challenges"*, Dehradun (pp. 1-13).
- Zhang, J., & Chen, Z. (2024). Exploring human resource management digital transformation in the digital age. *Journal of the Knowledge Economy*, 15(1), 1482-1498.