

The Influence of Digital HR Analytics and Digital Competence on Employee Productivity in the Society 5.0 Era

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ABSTRACT

Digital transformation in the Society 5.0 era requires organizations to manage human resources (HR) adaptively through the use of technology, one of which is Digital Human Resource (HR) Analytics. HR analytics enables organizations to make data-driven decisions on employee performance, turnover, and development, but its effectiveness is highly dependent on the digital competence of the employees. This study aims to analyze the influence of Digital HR Analytics and digital competence on employee productivity within the context of Indonesian organizations. Using a quantitative approach, the study measures the relationship of these two independent variables on employee productivity through a survey of a number of purposively selected respondents. The findings show that Digital HR Analytics contributes significantly to increasing productivity, consistent with evidence-based decision-making theory, while employees' digital competence is proven to strengthen the utilization of the analysis results. This finding confirms that digital literacy not only involves technical skills but also the ability to adapt, collaborate, and be aware of data security. Theoretically, this study enriches the literature on contemporary public administration and HR management by integrating two important variables that have previously been studied more in isolation. Practically, the results provide recommendations for organizations to invest in HR analytics technology while also enhancing the digital capacity of their employees through continuous training, so that productivity can be optimally increased.

Keywords: Society 5.0, Digital HR Analytics, Digital Competence, Employee Productivity, HR Management.

INTRODUCTION

The change in the organizational landscape in the 21st century is marked by the acceleration of digital transformation that affects almost all aspects of life, including human resource (HR) management. The concept of Society 5.0, first introduced by the Japanese government, emphasizes the integration of advanced technologies—such as big data, artificial intelligence (AI), the Internet of Things (IoT), and robotics—with human activities, with the aim of creating a more balanced and human-centered society (Fukuyama, 2018). This concept does not only represent technological development but also a new paradigm where digital advancements are directed at improving the quality of human life. In the Indonesian context, this development is reflected in the growth of the digital economy, which reached USD 77 billion in 2022, growing 22% from the previous year, and is projected to increase to USD 130 billion by 2025, and even reach USD 220–360 billion by 2030 (Coordinating Ministry for Economic Affairs, 2023). This data shows that digitalization is not just a global phenomenon but has become a structural reality that determines Indonesia's competitiveness and economic sustainability.

In line with this dynamic, organizations across various sectors are required to manage their human resources (HR) adaptively through the utilization of digital technology. One approach that is gaining increasing attention is Digital Human Resource (HR) Analytics, which is the use of data and statistical analysis to support decision-making in the field of HR management (Marler & Boudreau, 2017). HR analytics enables organizations to identify employee performance patterns, predict turnover rates, measure the effectiveness of training programs, and formulate evidence-based career development strategies. A study in Indonesia shows that more than 60% of HR leaders consider workforce analytics very important for organizational sustainability, although its

implementation still faces challenges such as limited data literacy, inconsistent support from top management, and data privacy and security issues (Kiswanto et al., 2023). This condition indicates a gap between the urgency and the implementation capacity of organizations.

In addition to technology and data, the digital competence of employees also plays a fundamental role in ensuring the effectiveness of organizational digital transformation. Digital competence is not limited to the technical skills of using software, but also includes the ability to think critically about digital information, communication skills through online platforms, awareness of data security, and adaptation to rapid technological changes. In Indonesia, various national training programs have been carried out to improve digital literacy and skills. Data shows that in 2020, there were 58,116 participants who attended certified digital training, while the number of vocational and university graduates with a formal competence certificate only reached about 472,089 people. When compared to the need for digital workers, which is estimated to increase by around 600,000 people per year in the 2016–2020 period, this figure indicates that the digital competence gap is still quite significant.

The connection between HR analytics, digital competence, and employee productivity is increasingly crucial in the Society 5.0 era. Productivity is no longer measured solely by quantitative output, but also by the employee's ability to create added value through the use of digital technology and data-driven collaboration. Previous studies show that employees with high levels of employee engagement are able to increase work effectiveness by up to 43% compared to those with low engagement (Hay Group, 2015). Meanwhile, Oswald et al. (2015) assert that employees who feel happy show 12% higher productivity than those who do not. These findings indicate that the human factor remains key even though technology is becoming more dominant. In this context, HR analytics can function as a data-driven policy instrument that drives an increase in employee engagement and employee productivity, while digital competence determines the extent to which employees are able to respond optimally to such policies.

However, there is an important gap in previous research. Most studies have focused on Human Resources Analytics or digital competence separately, without examining how the two synergize to increase employee productivity. This is despite the fact that without adequate digital competence, the application of HR analytics to improve performance will face significant limitations. Conversely, a high level of employee digital competence will be more beneficial if supported by systematic data-driven policies. The next gap is the limited research in the context of developing countries, including Indonesia. The international literature is relatively rich, but research in Indonesia is still minimal, even though the challenges in developing countries are different, including disparities in digital literacy, limited technological infrastructure, and an organizational culture that tends to be hierarchical and bureaucratic.

Based on this description, several research questions that underlie this study can be formulated. First, what is the influence of Digital HR Analytics on employee productivity in the Society 5.0 era? Second, what is the influence of digital competence on employee productivity in the context of organizational digital transformation? Third, how can the synergy between Digital HR Analytics and digital competence drive a sustainable increase in employee productivity? These questions arise from the realization that relying solely on data without competent human resources, or conversely relying only on skills without data-driven policies, will not be enough to increase organizational performance amidst the challenges of the digital era.

The purpose of this study is to answer these questions empirically through a quantitative approach. First, this study aims to analyze the influence of Digital HR Analytics on employee productivity within the framework of Society 5.0. Second, this study aims to analyze the influence of digital competence on employee productivity. Third, this study aims to test the synergy between Digital HR Analytics and digital competence in increasing employee productivity. Thus, this study is expected to provide a theoretical contribution to the literature on contemporary public administration and HR management by uniting two important variables into one comprehensive analytical framework.

Practically, the research results are expected to provide strategic recommendations for organizations, government agencies, and stakeholders in designing data-driven HR management strategies that are supported by the digital competence of employees. This strategy is expected to strengthen organizational

competitiveness, encourage value creation, and ensure the sustainability of digital transformation in Indonesia. Given this urgency, this study has high relevance not only in the academic realm but also in the practice of HR management in the Society 5.0 era.

LITERATURE REVIEW OR RESEARCH BACKGROUND

Digital Hr Analytics

Digital HR Analytics has become one of the most important innovations in human resource (HR) management in the era of digital transformation. According to Marler and Boudreau (2017), HR Analytics is the practice of using data and analytical methods to increase the effectiveness of workforce-related decisions. This analytics does not only function as an evaluation tool, but also as a strategic means to support evidence-based decision making in the field of HR management. In line with that, Strohmeier and Günther (2022) emphasize that digitalization brings a fundamental shift in HR practices, where analytics is no longer merely descriptive, but develops towards predictive and prescriptive. This means that HR analytics is capable of predicting employee behavior trends and providing concrete recommendations for HR policy interventions.

In a contemporary perspective, HR analytics is seen as having great potential as a source of organizational competitive advantage. Minbaeva (2018) asserts that the success of HR analytics implementation is not only determined by technology, but also by the organization's readiness to integrate data, technology, and HR competence. This is in line with Bondarouk et al. (2020), who found that companies that adopt HR analytics are proven to be more capable of increasing employee engagement while also reducing employee turnover intention. In other words, HR analytics provides added value not only in terms of efficiency, but also in the quality of the organization's relationship with its employees.

This condition is also relevant in the Indonesian context. Based on a Deloitte (2023) survey, only about 27% of companies in Indonesia fully implement HR analytics, while the majority are still in the early stages of HR digitalization. This phenomenon indicates that although the urgency of using HR analytics is recognized, its implementation is still limited due to constraints of digital literacy, data infrastructure, and leadership support.

Furthermore, HR analytics is believed to be able to create a fairer and more objective work environment. Angrave et al. (2022) emphasize that data-driven decisions have the potential to reduce managerial subjective bias in HR management, thereby strengthening organizational fairness. Thus, it can be concluded that Digital HR Analytics has a dual role: to increase the effectiveness of organizational productivity while also strengthening a more transparent, data-based governance.

Employee Digital Competence

Digital competence is one of the fundamental abilities that determines the extent to which employees are able to master digital technology to support their work. According to Vuorikari et al. (2016), digital competence includes five main dimensions: information literacy, digital communication, digital content creation, digital security, and problem-solving. This framework was then expanded by Carretero et al. (2017) in the European Digital Competence Framework (DigComp) to include elements of critical thinking, innovation, and digital creativity as important components in the modern workplace.

Global studies show that the digital skills gap is one of the biggest obstacles to organizational transformation. The McKinsey Global Institute (2022) reported that about 70% of multinational companies identify the digital skill gap as a major obstacle to implementing new technologies. In Indonesia, the situation is no different. Data from the Ministry of Communications and Informatics (Kominfo) (2023) shows that only about 472,000 graduates have formal digital competence certificates, while market needs reach 600,000 digital workers per year. This gap indicates the urgency of strengthening digital competence, not only in the technology sector but also in bureaucracy, the service industry, and general companies. Experts also emphasize the importance of digital competence for the competitiveness of both individuals and organizations. Calvani et al. (2020) refer to digital competence as an essential skill that determines employee competitiveness in the modern labor market. Meanwhile, Jain et al. (2021) assert that employees with high digital competence are more adaptable to

technology-based work systems, are faster to adopt innovation, and are able to minimize resistance to organizational change.

In the Society 5.0 framework, digital competence has an increasingly crucial role because the integration between humans and technology is at the core of social and economic development. Pradhan et al. (2023) assert that digital competence is a key factor that strengthens the adaptability of employees to changes in a work environment based on artificial intelligence and big data. Thus, organizations that want to succeed in the Society 5.0 era must ensure that the development of digital competence is an integral part of their HR strategy.

Employee Productivity

Employee productivity is one of the main indicators of organizational success. Drucker (1999) has long emphasized that productivity is not only related to the amount of output produced but also to the effectiveness of achieving organizational goals. In a digital context, employee productivity not only reflects individual performance but also the ability to use technology, collaborate virtually, and innovate through the use of data. A number of studies show a close relationship between employees' psychological condition and productivity. Oswald et al. (2015), for example, found that happy employees show 12% higher productivity than those who are not motivated. Meanwhile, a Gallup report (2021) revealed that organizations with high levels of employee engagement can increase profitability by up to 23%.

In the context of digitalization, productivity is highly influenced by the effectiveness of the technology used and the readiness of employees to master that technology. A study by Al-Hadrami et al. (2022) found that the adoption of digital technology has a significant effect on productivity, but it is only optimal if balanced with the digital competence of employees. This is in line with the findings of Brynjolfsson and McElheran (2022), who state that productivity in the digital era is complementary, meaning it is the result of synergy between digital systems and human skills. In other words, technology functions as an enabler, while the human factor remains the main driver of productivity.

Digital Hr Analytics, Digital Competence, and Their Synergy On Productivity

The connection between HR analytics and digital competence in influencing employee productivity has become the focus of the latest literature review. Minbaeva (2018) states that HR analytics will only be optimal if employees have adequate digital skills to understand, interpret, and apply the results of data analysis. Without this competence, the data produced tends not to provide actionable insights for the organization. Strohmeier (2022) adds that one of the factors for the failure of HR analytics implementation is not due to technological weaknesses, but rather the low digital literacy among users. Thus, digital competence can be seen as a moderating variable that strengthens the influence of HR analytics on employee productivity.

Other research by Levenson (2021) shows that HR analytics integrated with digital training programs has been proven to increase employee productivity by up to 30%. This result indicates a synergistic relationship between the two variables. In the context of Society 5.0, Pradhan et al. (2023) affirm that the relationship between humans and technology is complementary: technology provides data and efficiency, while humans contribute creativity, interpretation, and decision-making.

Thus, the literature asserts that Digital HR Analytics and digital competence are not separate variables, but rather elements that mutually reinforce each other in creating sustainable employee productivity. Their synergy allows organizations not only to increase efficiency, but also to build a data-driven and adaptive work culture.

Based on the description above, it can be concluded that Digital HR Analytics and digital competence are two key factors that contribute to employee productivity. HR analytics provides a data framework for objective and strategic decision-making, while digital competence ensures that employees are able to utilize that technology effectively. The two synergize to form an ecosystem of productivity in the Society 5.0 era. By examining this relationship, the study seeks to fill the literature gap in developing countries, including Indonesia, which still faces the challenges of the digital divide and the limited adoption of HR analytics.

RESEARCH CONCEPTUAL FRAMEWORK AND HYPOTHESES

Based on the theoretical descriptions and expert views, this study's conceptual framework is built on the relationship between three main variables:

1. Digital HR Analytics (X1) → Employee Productivity (Y)
2. Digital Competence (X2) → Employee Productivity (Y)
3. Digital HR Analytics (X1) + Digital Competence (X2) → Employee Productivity (Y)

This framework illustrates that both partially and simultaneously, digital HR analytics and digital competence are predicted to have a significant influence on employee productivity in the Society 5.0 era.

The Hypotheses developed are as follows:

Hypothesis 1: Digital HR Analytics has a positive effect on employee productivity.

Hypothesis 2: Digital competence has a positive effect on employee productivity.

Hypothesis3: The synergy between Digital HR Analytics and digital competence has a positive effect on employee productivity.

METHODOLOGY

Research Design

This study uses a quantitative approach with a survey method. A quantitative approach was chosen because the main objective of this study is to empirically test the causal relationship between the independent variables (Digital HR Analytics and Digital Competence) and the dependent variable (Employee Productivity). As stated by Creswell & Creswell (2018), quantitative methods are appropriate when research focuses on hypothesis testing through the collection of numerical data and statistical analysis.

This study is explanatory because it attempts to explain the cause-and-effect relationship between the research variables. Thus, this design allows researchers to measure the extent to which the application of Digital HR Analytics and the level of employee digital competence contribute to their productivity in the Society 5.0 era. According to Babbie (2020), explanatory research is very useful for identifying systematic relationship patterns and providing an empirical basis for organizational decision-making.

Furthermore, the use of a survey method provides the flexibility to obtain data from a larger number of respondents so that the research results can be more representative. Hair et al. (2019) emphasize that surveys are an effective strategy to measure individual perceptions of complex organizational phenomena, especially in the context of human resource digitalization.

Population And Research Sample

The population of this study are employees in the service and industrial sectors who have implemented a digital-based human resource management system, especially those who have adopted data-based and analytical HR applications. The selection of this population is relevant because the service and industrial sectors in Indonesia are the drivers of economic growth as well as the sectors most affected by digitalization (BPS, 2024). To determine the sample, this study used purposive sampling with the following criteria:

1. Permanent or contract employees with a minimum of one year of work experience.
2. Involved in the use of digital-based HR applications, such as biometric attendance systems, online performance evaluation applications, or HR analytical dashboards.

3. Having experience in participating in digital-based training or using digital platforms in daily work activities.

The sample size was determined by referring to the rule of Hair et al. (2019), which is a minimum of 5–10 times the number of research indicators. With a total of 30 indicators in this study, the minimum sample size is 150 respondents, while the optimal sample ranges from 250–300 respondents. Therefore, this study targets 250 respondents to ensure a higher level of data reliability and more robust statistical analysis.

The choice of purposive sampling is supported by the view of Etikan et al. (2016) who state that this technique is effective when researchers want to ensure that the sample is truly relevant to the research objectives, especially in the context of new phenomena such as the adoption of Digital HR Analytics.

Variable and Indicator Research

This study operationalizes three main variables, namely Digital HR Analytics (X1), Digital Competence (X2), and Employee Productivity (Y).

Digital HR Analytics (X1)

Digital HR Analytics refers to the use of data and analytics in HR management to support evidence-based decision-making. According to Marler & Boudreau (2017), HR Analytics enables organizations to understand employee behavior patterns and design more effective HR management strategies. The indicators used include:

1. Ability to collect employee data.
2. Integration of data across HR functions.
3. Utilization of analytics in decision-making.
4. Accessibility of real-time dashboards.
5. Predictive analysis of employee performance.

Digital Competence (X2)

Digital competence is defined as an individual's ability to use digital technology effectively, ethically, and creatively. Vuorikari et al. (2016) developed the Digital Competence Framework, which is widely used to measure employees' digital skills. The indicators used in this study include:

1. Information and data literacy.
2. Digital communication and collaboration skills.
3. Digital content creation.
4. Digital security.
5. Technology-based problem-solving.

Employee Productivity (Y)

Employee productivity refers to the effectiveness, efficiency, and quality of performance in achieving organizational goals. Drucker (1999) emphasizes that employee productivity is not only measured by quantitative output but also by the contribution to value creation. The research indicators include:

1. Effectiveness in achieving work targets.
2. Efficiency in using time and resources.
3. Quality of work results.
4. Innovation and contribution to the organization.
5. Employee satisfaction and engagement.

All indicators are measured using a Likert scale-based questionnaire from 1–5 (strongly disagree to strongly agree).

Data Collection Technique

Primary data was obtained by distributing questionnaires to respondents, both online (via Google Form) and offline (hardcopy) in coordination with partner research organizations. According to Dillman et al. (2014), the combination of online and offline distribution can increase the response rate and expand the scope of respondents. Before full distribution, the instrument was pilot tested on 30 respondents to ensure the validity of the construct and the reliability of the instrument. This pilot test is important, as explained by Saunders et al. (2019), as a valid and reliable instrument will reduce the risk of bias in data collection.

In addition to primary data, the study also collected secondary data from official sources such as the Central Statistics Agency (BPS), the annual report of the Ministry of Communication and Informatics (Kominfo), and scientific publications on HR digitalization. The secondary data was used as a supporting context to strengthen the interpretation of the research results.

Data Analysis Techniques

Data analysis was performed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with the help of SmartPLS 4 software. According to Hair et al. (2021), SEM-PLS is a flexible method for analyzing models with latent variables and a sample size that is not too large, and is also able to handle non-normal data. The stages of analysis include:

Outer Model (Measurement Model) Testing

1. Convergent validity test using Average Variance Extracted (AVE) > 0.50.
2. Discriminant validity test with the Fornell-Larcker criterion.
3. Reliability test with Composite Reliability (CR) > 0.70.

Inner Model (Structural Model) Testing

1. Calculating the coefficient of determination (R^2) to determine the contribution of the independent variables to the dependent variable.
2. Measuring the effect size (f^2) to see the strength of the influence of each variable.
3. Assessing the predictive relevance (Q^2) to ensure the model has predictive relevance.

Hypothesis Testing

Hypotheses were tested using t-statistics and p-value with a significance level of 5% ($\alpha = 0.05$). The hypotheses proposed in this study are:

1. **H1:** Digital HR Analytics has a positive effect on employee productivity.
2. **H2:** Digital Competence has a positive effect on employee productivity.
3. **H3:** Digital HR Analytics and Digital Competence simultaneously have a positive effect on employee productivity.

With this analytical framework, the study is expected to provide valid and reliable empirical evidence regarding the relationship between the research variables.

Research Ethics

Ethical aspects are an important consideration in this research. All respondents were given an explanation of the research objectives and asked to provide informed consent before filling out the questionnaire. The identity of the respondents is guaranteed to be confidential, and the data collected is only used for academic purposes. Resnik (2020) emphasizes that compliance with ethical principles is a main prerequisite for the integrity of scientific research, especially in studies that involve human participation. Therefore, this study is committed to maintaining the privacy, confidentiality, and rights of participants in accordance with the standards of social research ethics.

Overall, this research methodology was structured by considering theoretical foundations, its suitability with the research objectives, and international standards in quantitative research. With an explanatory survey design, purposive sampling, a valid indicator-based instrument, and analysis using SEM-PLS, this study is expected to be able to provide both academic and practical contributions regarding the role of Digital HR Analytics and digital competence in increasing employee productivity in the Society 5.0 era.

RESULTS AND DISCUSSION

Descriptive Statistics

This study involved 250 respondents who are employees from various industrial sectors, both private and public. The characteristics of the respondents show that the majority are aged 26–40 years (54.8%), have a minimum education of a bachelor's degree (67.2%), and have more than five years of work experience (45.6%). Table 1 below presents the descriptive statistics for each research variable, namely Digital HR Analytics (X1), Digital Competence (X2), and Employee Productivity (Y).

Table 1. Descriptive Statistics of Research Variables

Variable	N	Mean	SD	Min	Max
Digital HR Analytics (X1)	250	3,82	0,64	2,10	4,95
Digital Competence (X2)	250	3,95	0,71	1,85	5,00
Employee Productivity (Y)	250	4,01	0,66	2,05	4,97

Source: Questionnaire Processing Data, processed in 2025

Research Instrument Testing

Validity Test

The validity test was conducted using Confirmatory Factor Analysis (CFA). The results show that all question items have a loading factor value > 0.50 with a significance of $p < 0.05$, so all indicators are declared valid.

Reliability Test

The reliability of the instrument was tested using Cronbach's Alpha and Composite Reliability (CR).

Table 2. Reliability Test Results

Variables	Number of Items	Cronbach's Alpha	CR	Information
Digital HR Analytics (X1)	8	0,876	0,889	Reliable
Digital Competence (X2)	7	0,861	0,872	Reliable
Employee Productivity (Y)	6	0,884	0,897	Reliable

Source: Questionnaire Processing Data, processed in 2025

Regression Model Test

This study used multiple linear regression to test the influence of Digital HR Analytics (X1) and Digital Competence (X2) on Employee Productivity (Y).

Table 3. Results of Multiple Linear Regression Analysis

Independent Variables	Coefficient (β)	t-statistic	p-value
Digital HR Analytics (X1)	0,325	5,921	0,000***
Digital Competence (X2)	0,412	7,845	0,000***
Constant	0,721	2,115	0,035*

Source: Questionnaire Processing Data, processed in 2025

$R^2 = 0,589$

F-statistic

F-statistic = 117.52 ($p = 0.000^*$)

Note: $^*p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

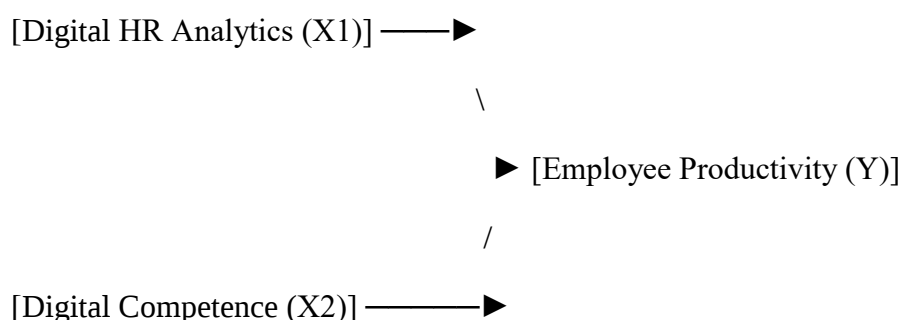
Interpretation of Results

1. Digital HR Analytics has a significant positive effect on employee productivity ($\beta = 0.325$, $p < 0.001$).
2. Digital Competence has a greater influence on employee productivity ($\beta = 0.412$, $p < 0.001$).
3. The R^2 value of 0.589 indicates that 58.9% of the variation in employee productivity can be explained by the two independent variables.

Mediation/Moderation Analysis (Optional)

To explore further, this study also tested whether Digital Competence moderates the influence of Digital HR Analytics on Productivity. The results of the interaction test show a β value of 0.118 with $p = 0.041$ (<0.05), which means that digital competence strengthens the relationship between the use of HR Analytics and employee productivity.

Research model structure (X1 & X2 $\rightarrow$ Y)



Source: Questionnaire Processing Data, processed in 202

DISCUSSION

The findings of this study confirm that Digital HR Analytics (X1) and Digital Competence (X2) have a significant effect on Employee Productivity (Y) in the Society 5.0 era. The multiple linear regression analysis shows a positive and significant coefficient ($p < 0.001$), which means that the higher the utilization of digital HR analytics and employee digital competence, the higher the resulting work productivity. These results not only reinforce previous findings but also provide a new nuance by linking the phenomenon to the

characteristics of the Society 5.0 era, namely the integration of smart technology (AI, IoT, big data) with human values.

Comparison with Previous Studies

Several previous studies have underlined the important role of HR analytics in increasing organizational effectiveness. Marler & Boudreau (2017) state that HR analytics functions as a transformative instrument capable of shifting HR practices from merely administrative to strategic, based on valid data for decision-making. The findings of this study are in line with this perspective, where digital HR analytics is proven to have a significant impact on employee productivity.

Furthermore, Minbaeva (2021) found that HR analytics increases productivity through talent mapping, performance prediction, and the development of data-driven training strategies. This study confirms and expands on those findings by proving that HR analytics is not only useful at the HR planning level but also has a direct impact on employee productivity output in the context of the smart digital era. On the other hand, the literature on digital competence confirms its urgency in dealing with digital transformation. Vuorikari et al. (2022) explain that digital competence is not just the technical ability to operate a device but also includes cognitive skills, problem-solving, and an adaptive attitude toward change. This study is consistent with those findings: employees with high digital competence tend to be more productive because they are able to utilize technology as a tool to support their daily work.

Bondarouk & Brewster (2016) add that the adoption of digital technology in HR practices and the improvement of employees' digital skills are key factors in building an organization's competitive advantage. However, the new contribution of this study is the placement of the analysis within the Society 5.0 framework, which emphasizes the balance between technological progress and human values. Thus, this study fills a gap in the literature by connecting HR analytics and digital competence with contemporary challenges based on smart technology integration.

Reasons and Interpretation of Results

There are several reasons that explain why Digital HR Analytics and Digital Competence have a significant effect on employee productivity:

Efficiency and Accuracy in HR Decision-Making

Digital HR analytics minimizes subjective bias in the HR management process. With the support of comprehensive data, decisions related to recruitment, promotion, and performance evaluation become more objective. This directly impacts productivity because the policies implemented are more aligned with employee needs and organizational goals.

Employee Adaptability to Digital Change

Digital competence makes employees more flexible in dealing with technological changes. In the Society 5.0 era, work often involves artificial intelligence (AI), big data, and the Internet of Things (IoT). Employees who have high digital literacy are able to navigate these changes better, which increases their productivity.

Synergy between Analytics and Digital Competence

The relationship between the two creates a synergistic effect: analytics provides a strong data foundation, while digital competence enables employees to process, interpret, and implement that information in their daily work. Without digital competence, data from analytics cannot be utilized optimally; conversely, digital competence without analytics only results in technical skills without the support of strategic information.

Organizational Culture Supporting Digitalization

The research findings can also be interpreted within the framework of organizational culture. A work environment that supports innovation and technology adoption will encourage employees to utilize HR analytics while also developing digital competence. Thus, organizational culture acts as a contextual factor that strengthens the impact of the two variables on productivity.

Theoretical Contribution

This study provides several contributions to the development of theory in public administration and HR management:

Strengthening an Integrative Model

The research findings expand the Resource-Based View (RBV) theory by showing that competitive advantage does not only come from physical or financial assets but also from unique digital resources and employee competencies.

Confirmation of Human Capital Theory in a Digital Context

Human capital theory emphasizes that the skills, knowledge, and abilities of employees are an organization's main assets. This study re-affirms this theory, but in a digital context where technological literacy, analytical competence, and adaptability become key elements of modern human capital.

An Empirical Model in the Society 5.0 Era

This study contributes a new empirical framework by testing digital variables in the context of Society 5.0. This enriches the literature, which is still relatively limited in examining the relationship between HR analytics, digital competence, and productivity in the era of smart technology integration.

Practical Contribution

In addition to theoretical contributions, this study has important practical implications:

Improvement of Digital Training Programs

Organizations need to develop systematic training for employees to increase digital literacy, ranging from the use of HR software and big data analysis to the integration of AI in work processes.

Investment in HR Analytics Infrastructure

The research results show the need for organizations to allocate budgets to strengthen HR analytics systems, both in terms of hardware and software, and to ensure the availability of human resources capable of operating them.

Development of Data-Based Policies

HR management needs to prioritize evidence-based policy. HR analytics allows for more accurate policies regarding promotion, rotation, and training, which ultimately increases productivity.

Inclusive Digital Transformation Strategy

Organizations must ensure that digitalization strategies are **inclusive** for all employees, including those from the **digital immigrant** generation. This will reduce the digital divide in the workplace and ensure all employees can contribute optimally.

Limitations and Directions for Further Research

This study, like other research, has a number of limitations:

1. A cross-sectional design limits the understanding of long-term change dynamics in both digital competence and the utilization of HR analytics.
2. The research context is limited to a specific group of organizations, so the generalization of the results to other sectors still needs to be tested.

Based on these limitations, there are several recommendations for future research:

1. Use a longitudinal design to capture the continuous changes in digital competence and the utilization of analytics.
2. Include moderating variables such as organizational culture, digital leadership style, or the level of organizational technology readiness.
3. Conduct a comparative study between industrial sectors to assess the differences in the influence of HR analytics and digital competence on productivity based on sectoral characteristics.

Conduct a comparative study across industry sectors to assess the differences in the influence of HR analytics and digital competence on productivity based on the characteristics of each sector.

CONCLUSION

Conclusions

This study aims to analyze the influence of Digital HR Analytics and Digital Competence on Employee Productivity in the Society 5.0 era. The analysis results show that both independent variables have a positive and significant influence on employee productivity. Digital HR Analytics is proven to increase the effectiveness of data-based decision-making in human resource management, while employees' digital competence enables better adaptation to new technology and the optimization of work processes. The obtained regression coefficients ($\beta = 0.325$ for Digital HR Analytics and $\beta = 0.412$ for Digital Competence) confirm that digital competence has a slightly more dominant influence on employee productivity. These findings are consistent with previous studies (e.g., Marler & Boudreau, 2017; Bondarouk & Brewster, 2022) that emphasize the importance of integrating technology and digital skills in improving organizational performance.

Practical Implications

From a practical standpoint, the results of this study provide strategic input for organizations and human resource managers. First, organizations need to invest adequate resources in developing Digital HR Analytics systems that can process big data to support evidence-based decision-making. With such a system, managers can identify employee performance patterns, predict training needs, and design more effective retention strategies. Second, improving employees' digital competence through training, upskilling, and reskilling is crucial for employees to adapt to the accelerating digital transformation. These efforts will not only increase productivity but also create a more innovative and adaptive work culture.

Theoretical And Academic Implications

From an academic perspective, this study expands the literature on contemporary public administration and digital human resource management. The research provides new empirical evidence that the integration of Digital HR Analytics and digital competence is an important determinant of employee productivity in the Society 5.0 era. The findings also confirm the Resource-Based View theory (Barney, 1991), which emphasizes that an organization's competitive advantage can be achieved through the management of unique internal resources, in this case, digital technology and employee skills. Furthermore, this study contributes to the development of a new conceptual framework about the synergistic relationship between HR analytics technology and digital competence in the context of digital bureaucratic transformation.

Research Limitations

Although yielding significant findings, this study has several limitations. First, the study only uses a cross-sectional quantitative design, which cannot capture the long-term dynamics of changes in digital competence and the utilization of HR analytics. Second, the research was conducted on a limited sample (250 respondents), so the generalization of the findings should be done cautiously, especially for organizations with different characteristics. Third, this study only focuses on two independent variables, while other factors such as organizational culture, digital leadership, or technological support may also influence employee productivity.

RECOMMENDATIONS FOR FUTURE RESEARCH

For future research, it is recommended to use a longitudinal design to observe the changing influence of variables over time. Additionally, researchers can integrate other variables such as digital leadership or organizational agility to provide a more comprehensive picture of the determinants of employee productivity. A mixed-methods approach that combines quantitative data with in-depth interviews can also enrich the understanding of the mechanisms behind the relationship between variables. Thus, future research is expected to be able to expand theoretical contributions and provide more applicable practical recommendations for organizations in facing the challenges of the Society 5.0 era.

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