

Transformation of HR Development Through Performance Evaluation to Enhance Competitive Advantage in the Digital Era

Enhance Competitive
Advantage in the
Digital Era

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ABSTRACT

Digital transformation demands adaptive HR strategies to sustain organizational performance and achieve competitive advantage. This study investigates how Human Resource (HR) development transforms in the digital era through performance evaluation and its influence on competitive advantage. As digital technologies reshape organizational dynamics, HR strategies must adapt to maintain business performance. The research examines the roles of recruitment and selection, training and development, and compensation management in influencing performance evaluations, which in turn affect competitive advantage. Employing a quantitative descriptive method, data were gathered from 150 respondents across private companies in Medan, Indonesia, using surveys, observations, and interviews. The analysis used purposive sampling and was processed with PLS-SEM via SmartPLS 4.0. Findings indicate that recruitment and selection, as well as training and development, significantly enhance performance evaluation. However, compensation management does not exhibit a meaningful effect. Additionally, performance evaluation strongly contributes to achieving a competitive advantage. These results underscore the need for HR practices to focus on talent acquisition and skills development tailored to digital demands. The study concludes that performance evaluation plays a key mediating role in linking HR functions to strategic business outcomes. Future research should examine how digital tools and artificial intelligence can further support agile and adaptive HR processes.

Keywords: Compensation Management, Competitive Advantage, Performance Evaluation, Recruitment and Selection, Training and Development.

ABSTRAK

Transformasi digital menuntut strategi SDM yang adaptif untuk mempertahankan kinerja organisasi dan mencapai keunggulan kompetitif. Studi ini menyelidiki bagaimana pengembangan Sumber Daya Manusia (SDM) bertransformasi di era digital melalui evaluasi kinerja dan pengaruhnya terhadap keunggulan kompetitif. Seiring teknologi digital membentuk kembali dinamika organisasi, strategi SDM harus beradaptasi untuk mempertahankan kinerja bisnis. Penelitian ini mengkaji peran rekrutmen dan seleksi, pelatihan dan pengembangan, serta manajemen kompensasi dalam memengaruhi evaluasi kinerja, yang pada gilirannya memengaruhi keunggulan kompetitif. Dengan menggunakan metode deskriptif kuantitatif, data dikumpulkan dari 150 responden di seluruh perusahaan swasta di Medan, Indonesia, melalui survei, observasi, dan wawancara. Analisis menggunakan purposive sampling dan diproses dengan PLS-SEM melalui SmartPLS 4.0. Temuan menunjukkan bahwa rekrutmen dan seleksi, serta pelatihan dan pengembangan, secara signifikan meningkatkan evaluasi kinerja. Namun, manajemen kompensasi tidak menunjukkan efek yang berarti. Selain itu, evaluasi kinerja berkontribusi besar terhadap pencapaian keunggulan kompetitif. Hasil ini menggarisbawahi perlunya praktik SDM untuk berfokus pada akuisisi bakat dan pengembangan keterampilan yang disesuaikan dengan tuntutan digital. Studi ini menyimpulkan bahwa evaluasi kinerja memainkan peran mediasi kunci dalam menghubungkan fungsi SDM dengan hasil bisnis strategis. Penelitian di masa mendatang

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INTRODUCTION

The rapid advancement of the digital era has transformed organizational landscapes, necessitating adaptive Human Resource (HR) strategies to sustain performance and achieve competitive advantage. Digital technologies have reshaped how organizations operate, requiring HR practices to evolve in response to changing job demands, employee skills, and cognitive characteristics (Murugesan et al., 2023). Performance evaluation, a critical component of HR management, must align with these technological shifts to bridge performance gaps and enhance organizational outcomes (Al Silfi, 2022). By conducting comprehensive evaluations, organizations can assess team and individual contributions, ensuring alignment with strategic goals. This process is vital for identifying strengths, addressing weaknesses, and fostering employee development in a digitally driven environment. As digital transformation accelerates, HR must leverage technology to optimize talent management and maintain organizational competitiveness (Wildanika et al., 2024).

Karim et al. (2019) highlight the pivotal role of performance evaluation in HR development. The studies emphasize that effective performance evaluation strengthens the link between recruitment and organizational needs, ensuring talent acquisition aligns with business objectives. Similarly, training programs tailored to digital demands enhance employee competencies, as noted by Galanou & Priporas (2009), who underscore their role in shaping work behavior. Urbancová et al. (2021) argue that employee training bridges the gap between current and desired competencies, fostering adaptability and job satisfaction. Additionally, compensation management influences employee motivation and performance, with well-designed systems enhancing engagement (Elnaga & Imran, 2013). Kucherov and Manokhina (2017) and Ludwikowska (2018) further suggest that structured HR practices, including performance evaluation, drive organizational efficiency. However, these studies often focus on isolated HR functions without integrating their collective impact on competitive advantage in a digital context.

Despite these insights, a specific research gap persists in understanding how integrated HR functions recruitment, training, and compensation collectively influence performance evaluation and, subsequently, competitive advantage in the digital era. According to Wibowo et al. (2021), many studies examine recruitment and training independently but fail to explore their combined effect on performance evaluation within digitalized organizations. Similarly, Pratama and Susanti (2022) highlight that compensation management's role in performance evaluation is often overlooked in digital contexts, where non-monetary factors like skill development may dominate. This gap is significant, as digital transformation demands holistic HR strategies that align multiple functions to achieve strategic outcomes. Furthermore, prior research lacks focus on how performance evaluation mediates the relationship between these HR practices and competitive advantage, particularly in emerging markets like Indonesia. The novelty of this study lies in its integrated approach, examining how these HR functions interact through performance evaluation to drive competitive advantage in a digitalized business environment.

This study aims to analyze the transformation of HR development in the digital era by investigating how recruitment and selection, training and development, and compensation management influence performance evaluation and contribute to competitive advantage. Specifically, it seeks to examine the direct effects of these HR functions on performance evaluation and assess how performance evaluation mediates their impact on competitive advantage in private companies in Medan, Indonesia. By

addressing this research gap, the study provides a comprehensive framework for HR practitioners to design adaptive strategies that align with digital demands. The rationale for this research is rooted in the need to understand how integrated HR practices can enhance organizational agility and competitiveness in a rapidly evolving digital landscape, offering practical insights for businesses in emerging markets.

LITERATURE REVIEW

Recruitment and Selection

Recruitment and selection are one of the key strategic areas in Human Resource Management. In Human Resource Management, recruitment and selection are referred to as very traditional management functions that have existed for decades, which are at odds with the ever-changing internal and external environment of the organization (Dessler, 2020). The recruitment and selection process is the process of searching for and gathering prospective candidates who have the desired knowledge, skills, and experience, so that the organization can select the most suitable person to fill a job vacancy according to the description and specifications of the position that has been set (Thiruvengatraj & Nirmal Kumar, 2024). Separately, recruitment is defined as an activity that produces a pool of applicants who have the desire to work in the organization, from which those who are suitable can be selected. While selection is a careful screening process of candidates who apply for appointment in order to select the most suitable people for the position to be filled (Rajyalaxmi, 2023). Indicators of recruitment and selection include offer acceptance rate, new hire quality, recruiter satisfaction, selection ratio, employee maturity, qualification match, soft skills performance, and company culture adaptation (Teruna & Ardiansyah, 2022; Stup et al., 2025).

H1: Recruitment and selection variables have a positive and significant effect on performance evaluation.

Training and Development and Compensation Management

Training and development in Human Resource Management are two distinct yet interrelated aspects of employee development (Hussain et al., 2023). Training focuses on enhancing employee skills and knowledge for current job roles, while development prepares employees for greater responsibilities in the future. According to Russell (2023), well-structured training and development programs offer numerous benefits to organizations, including improved job satisfaction, morale, motivation, process efficiency, and financial performance. These programs also boost the ability to adopt new technologies, foster innovation, reduce employee turnover, and strengthen the company's image. Training and development are now viewed as systemic processes delivering value at social, organizational, group, and individual levels. Common indicators of training and development include training methods, adequate learning opportunities, and employee empowerment through participation programs (Al-Tit et al., 2022; Arulsamy et al., 2023; Rosilius et al., 2024).

Meanwhile, compensation management in Human Resource Management refers to the strategic process of planning, managing, and administering reward systems within an organization. Compensation includes salaries, bonuses, allowances, and paid leave provided in exchange for employee performance (Firdaus & Oetarjo, 2022). A well-designed compensation system not only helps in recruitment and retention but also plays a vital role in boosting job satisfaction and encouraging better employee performance. It ensures employees are fairly rewarded for their contributions, leading to higher engagement and willingness to deliver beyond expectations. Ideal compensation practices also support organizational goals and foster a productive work environment. Indicators of effective compensation management include salary, bonuses, allowances, and paid leave (Zayed et al., 2022). Together, both training and compensation strategies are critical for enhancing workforce capability and aligning HR functions with organizational success.

- H2: Training and development variables have a positive and significant effect on performance evaluation.
- H3: The compensation management variable has a positive and significant effect on performance evaluation.

Performance Evaluation

Performance evaluation is a systematic process aimed at assessing employee work performance within an organization over a specific period. It encompasses assessment, rating, and evaluation, serving as a core component of Human Resource management that supports the development of effective policies and programs (Vuong & Nguyen, 2022; Hati et al., 2024). The evaluation process involves assessors formally collecting and documenting employee performance data, which is then compared with established performance standards to support HR decision-making. Performance evaluation plays a strategic role in aligning employee productivity with organizational goals, thus facilitating goal achievement. Key indicators include work performance, cooperation, leadership, honesty, and obedience (Widiaswari et al., 2021). These indicators are not only reflective of individual contribution but also collectively shape the overall organizational performance.

The effective performance evaluation can significantly impact competitive advantage by enabling organizations to identify talent, allocate resources efficiently, and enhance employee development. Competitive advantage is derived from robust HR systems and adaptive strategies that reflect an organization’s capacity to respond to environmental changes (Emilova Yuleva, 2019; Enyindah & Stella, 2021). As noted by Aigbe et al. (2024), the source of competitive advantage has evolved from tangible assets to intangible ones, such as employee competencies, attitudes, and collaboration. Performance evaluation facilitates this shift by nurturing the necessary human capital for strategic growth. Moreover, competitive advantage is closely tied to innovation, which is driven by the ability to harness internal capabilities effectively (Thi et al., 2023). Indicators such as HR development, motivation, and empowerment underscore this relationship (Pahuja et al., 2024). Thus, performance evaluation serves as a critical enabler for sustaining and enhancing competitive advantage in today’s dynamic environment.

- H4: The performance evaluation variable has a positive and significant effect on competitive advantage.

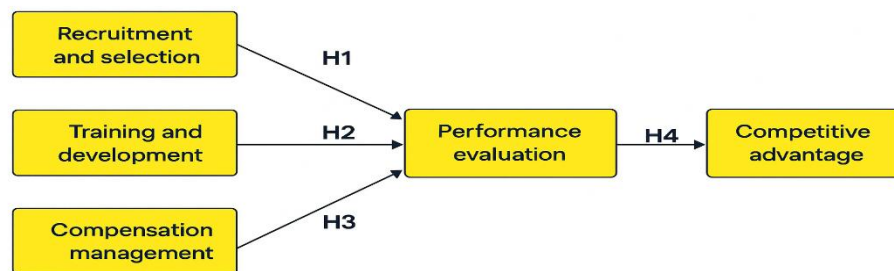


Figure 1. Conceptual Framework

Figure 1 shows a conceptual framework that illustrates the relationship between variables in a study of the influence of human resource management functions on competitive advantage through performance evaluation. There are four exogenous variables, each labeled: Recruitment and Selection, Training and Development, and Compensation Management, all of which lead to the mediating variable Performance Evaluation. Furthermore, Performance Evaluation has a direct influence on Competitive Advantage as an endogenous variable. The arrows connecting the variables indicate the

direction of the causal relationship promised in the hypothesis. This model confirms that the quality of recruitment, training, and compensation management contributes positively and significantly to improving performance evaluation, which ultimately impacts the achievement of organizational competitive advantage. This figure provides a clear visual representation of the conceptual framework in this study.

RESEARCH METHODS

The research employs a quantitative descriptive approach, which is a technique used to test, measure, and analyze hypotheses based on mathematical and statistical calculations. This approach allows researchers to describe phenomena objectively using numerical data. The data collection methods include surveys using questionnaires, direct observations, and interviews. These methods were chosen to ensure the accuracy and depth of the data obtained, providing comprehensive insights that support the overall objectives of the study. The distribution of questionnaires using Google Forms containing questions related to indicators of recruitment and selection variables, training and development, compensation management, performance evaluation, and competitive advantage. The population in this study refers to the Maximum Likelihood Estimation (MLE), namely the determination of the number of samples based on the set sample of 100-200 samples.

So, the author set it to 150 samples, which are state-owned and private companies in the city of Medan. The sampling technique uses purposive sampling. The scale technique used by the author is the Likert scale. Finally, the data analysis technique was used to solve problems with the Smart PLS v.4.0 application to predict the model tested in the study. Data analysis was performed using the Partial Least Square (PLS) method using SmartPLS software version 4. PLS is one of the Structural Equation Modeling (SEM) solution methods, which in this case is more compared to other SEM techniques. SEM has a higher level of flexibility in research that connects theory and data, and is able to perform path analysis with latent variables, so it is often used by researchers who focus on social sciences. Partial Least Square (PLS) is a fairly strong analysis method because it is not based on many assumptions. Data also does not have to be a multivariate normal distribution (indicators with categorical, ordinal, interval, or ratio scales can be used in the same model), and the sample does not have to be large.

RESULTS

The outer model testing aims to assess the validity and reliability of a model. This section focuses on analyzing the influence of Average Variance Extracted (AVE), Discriminant Validity, and Composite Reliability. Average Variance Extracted (AVE) is a value used to test convergent validity, as it is derived from the results of the Convergent Validity assessment. The expected AVE value should be greater than 0.50 to meet the required validity criteria, and the specific values can be found in the following table.

Table 1. Average Variance Extracted (AVE)

Variables	Average Variance Extracted (AVE)
Compensation Management	0.892
Competitive Advantage	0.833
Performance Evaluation	0.608
Recruitment and Selection	0.856
Training and Development	0.859

Table 1 displays the Average Variance Extracted (AVE) values for the five variables in the study, which were used to assess the convergent validity of each construct. All variables showed AVE values above the minimum threshold of 0.50, indicating that each construct had an adequate level of convergent validity. The Compensation Management variable had the highest AVE value of 0.892, followed by Training and Development (0.859), Recruitment and Selection (0.856), and Competitive Advantage (0.833), indicating that the indicators in these constructs were able to explain most of the variance

they contained. Meanwhile, Performance Evaluation had an AVE value of 0.608, which, although lower than the other variables, still met the convergent validity criteria. Overall, these results indicate that all constructs in the model have met the convergent validity requirements well.

Referring to Table 1, the Average Variance Extracted (AVE) values for the variables of recruitment and selection, training and development, compensation management, performance evaluation, and competitive advantage all exceed the threshold of 0.50. Therefore, it can be concluded that the model does not encounter any issues related to convergent validity.

Table 2. Composite Reliability and Cronbach’s Alpha

Variables	Cronbach’s Alpha	Composite Reliability
Compensation Management	0.960	0.971
Competitive Advantage	0.900	0.937
Performance Evaluation	0.834	0.883
Recruitment and Selection	0.972	0.976
Training and Development	0.945	0.961

Table 2 shows the Cronbach’s Alpha and Composite Reliability values for the five main variables in the study, which are used to measure the internal consistency and reliability of the constructs. All variables have Cronbach’s Alpha values above the threshold of 0.70, indicating that the items in each construct have excellent internal consistency. The Recruitment and Selection variable recorded the highest values for Cronbach’s Alpha (0.972) and Composite Reliability (0.976), followed by Compensation Management with a Cronbach’s Alpha value of 0.960 and a Composite Reliability of 0.971. Meanwhile, the Training and Development variable also showed high reliability with values of 0.945 and 0.961. The Competitive Advantage and Performance Evaluation variables each had Cronbach’s Alpha values of 0.900 and 0.834 and Composite Reliability of 0.937 and 0.883, respectively. These results indicate that all constructs in the model have excellent reliability and can be trusted for further analysis.

Referring to Table 2, all constructs display Composite Reliability and Cronbach’s Alpha values exceeding 0.70. Therefore, the model demonstrates no one-dimensionality issues and fulfills the established reliability criteria. Furthermore, referring to Table 3, the inner model test is generally adequate, as indicated by the R-Square value obtained from the SmartPLS output. The performance evaluation variable shows an R-Square value of 0.798, or 79.8%, which categorizes the model as “very strong.” The remaining 20.2% is attributed to factors not included in this study.

Table 3. R-Square Output

Variables	R Square
Competitive Advantage	0.372
Performance Evaluation	0.798

Figure 2 displays a structural model that illustrates the relationship between the variables in the study, namely Recruitment and Selection, Training and Development, Compensation Management, Performance Evaluation, and Competitive Advantage. Each latent variable is measured by several indicators with factor loading values all above 0.89, indicating very strong construct validity. Recruitment and Selection has a positive and significant influence on Performance Evaluation with a path coefficient of 0.439, followed by Training and Development, which also has a positive influence with a value of 0.427. Meanwhile, Compensation Management shows a very small influence on Performance Evaluation, namely 0.055, which indicates an insignificant relationship. Performance Evaluation acts as a mediating variable that influences Competitive Advantage with a path coefficient of 0.610. The R-square value for Performance Evaluation is 0.798, which means that 79.8% of the variation in performance evaluation is explained by the three independent variables. Meanwhile, the R-square value for

Competitive Advantage is 0.372, indicating that 37.2% of the variation in competitive advantage is influenced by Performance Evaluation. This model as a whole illustrates the important role of performance evaluation in bridging HR management functions towards achieving competitive advantage in the digital era.

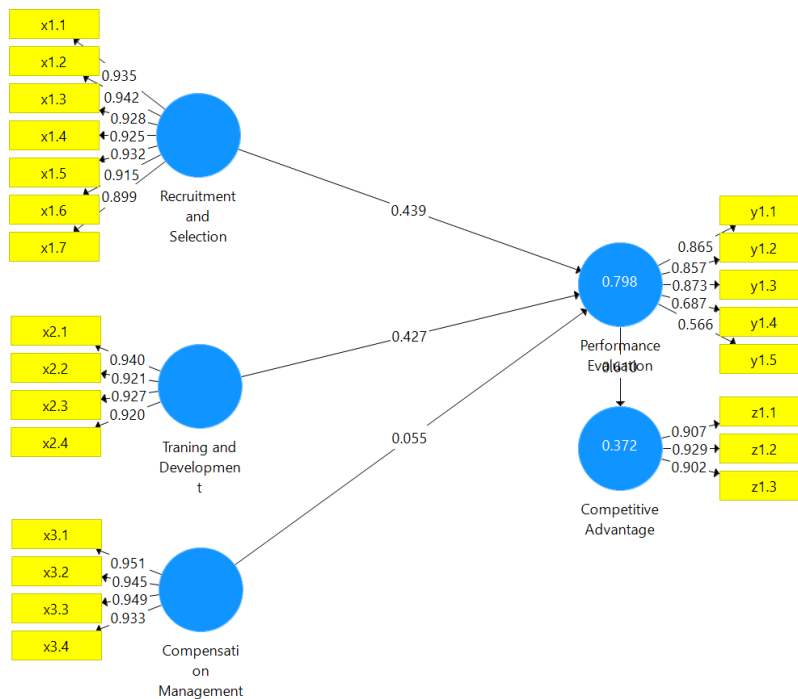


Figure 2. Bootstrapping Results

Table 4. Path Coefficients

Hypothesis	Original Sample	Mean	STDEV	T-Statistics	P-Values
Recruitment and Selection → Performance Evaluation	0.439	0.425	0.127	3.452	0.001
Training and Development → Performance Evaluation	0.427	0.441	0.13	3.293	0.001
Compensation Management → Performance Evaluation	0.055	0.054	0.053	1.025	0.306
Performance Evaluation → Competitive Advantage	0.61	0.61	0.073	8.365	0

Table 4 outlines the results of hypothesis testing, including the Original Sample (O), Sample Mean (M), Standard Deviation (STDEV), T-Statistics, and P-Values for each relationship. The Recruitment and Selection variable significantly influences Performance Evaluation, with a path coefficient of 0.439, a t-statistic of 3.452, and a p-value of 0.001. This moderate effect size suggests that a well-structured recruitment process substantially enhances performance evaluation outcomes by ensuring the selection of candidates whose skills and values align with organizational needs. The statistical significance ($p < 0.05$) underscores the critical role of talent acquisition in fostering a workforce capable of meeting digital-era demands. Theoretically, this aligns with human capital theory, which posits that strategic recruitment builds organizational capability by securing high-quality human resources. The finding implies that organizations prioritizing rigorous selection processes can expect improved employee performance metrics, enhancing the accuracy and effectiveness of evaluations.

Training and Development significantly impacts Performance Evaluation, with a path coefficient of 0.427, a t-statistic of 3.293, and a p-value of 0.001. This effect size, comparable to recruitment, indicates that continuous skill development programs are vital for equipping employees with competencies suited to digital transformation. The result

supports learning organization theory, which emphasizes ongoing employee development as a driver of organizational adaptability. Training initiatives, such as those incorporating digital tools, enhance employees' ability to perform complex tasks, leading to higher evaluation scores in areas like work quality and cooperation. The implication is that organizations investing in tailored training programs can cultivate a more agile and competent workforce, directly improving performance evaluation outcomes and organizational resilience in a dynamic environment.

In contrast, Compensation Management shows an insignificant effect on Performance Evaluation, with a low path coefficient of 0.055, a t-statistic of 1.025, and a p-value of 0.306. This small effect size suggests that compensation practices, such as salaries and bonuses, have minimal direct influence on performance evaluation in this context. The lack of significance may stem from compensation being perceived as a hygiene factor rather than a motivator, as per Herzberg's Two-Factor Theory, where adequate compensation prevents dissatisfaction but does not necessarily drive performance. These findings challenge assumptions that financial rewards universally enhance performance evaluations, suggesting that non-monetary factors like skill development may take precedence in digital-era organizations. Practically, this implies that HR managers should balance compensation with intrinsic motivators to optimize evaluation outcomes.

Performance Evaluation strongly influences Competitive Advantage, with a path coefficient of 0.610, a t-statistic of 8.365, and a p-value of 0.000. This large effect size highlights performance evaluation's pivotal role as a mediator in translating HR practices into strategic outcomes. The high t-statistic and significant p-value confirm that robust evaluation systems enable organizations to identify and nurture talent, allocate resources effectively, and drive innovation, aligning with the Resource-Based View (RBV) theory, which links internal capabilities to competitive advantage. The R-square value of 0.372 for Competitive Advantage indicates that 37.2% of its variance is explained by Performance Evaluation, underscoring its strategic importance. This finding suggests that organizations leveraging performance evaluation can enhance agility, innovation, and market positioning, providing a sustainable edge in the digital landscape.

DISCUSSION

In hypothesis testing, decisions are based on the t-statistic and p-value. If the t-statistic is greater than 1.96 and the p-value is less than 0.05, the hypothesis is accepted (Niken et al., 2022). Based on the results, the recruitment and selection variable has a path coefficient of 0.439, with a t-statistic of 3.452 and a p-value of 0.001. These results indicate that the hypothesis is accepted, confirming that recruitment and selection significantly influence performance evaluation. Effective HR management that emphasizes recruitment and selection reflects organizational contextual awareness. A structured and strategic recruitment process helps organizations attract high-quality human resources. Klepić et al. (2020) noted a correlation between recruitment and organizational creativity, which varies based on company size. Muscalu (2015) emphasized the importance of identifying internal and external recruitment sources to expand the talent pool. Pamungkas (2023) added that companies adopt modern methods and in-depth interviews to assess motivation, interpersonal skills, and commitment. These structured and continuous processes ultimately improve organizational performance (Van Hoyer, 2012).

For the training and development variable, the path coefficient is 0.427, with a t-statistic of 3.293 and a p-value of 0.001, indicating hypothesis acceptance. These findings confirm that training and development significantly influence performance evaluation. The study highlights that training and development, when based on needs analysis, are essential for preparing competent human resources. Kamal Rezza (2018) supported this by stating that training increases skills, competitiveness, and career growth opportunities. Ludwikowska (2018) added that training equips employees with the competencies needed to meet technological and efficiency demands. Amegayibor (2021) emphasized that effective training methods enhance organizational performance and reflect high

standards. Companies that prioritize employee development tend to conduct routine evaluations, which align with efficient HR management strategies.

Conversely, the hypothesis for compensation management is rejected, as the path coefficient is only 0.055, with a t-statistic of 1.025 and a p-value of 0.306. This suggests that compensation management does not significantly influence performance evaluation in this study. This result contrasts with some prior research, possibly due to the fact that compensation is largely determined by top management and institutional policies, which are not easily altered. Touma (2022) outlined compensation as one of five key HR components, alongside recruitment, training, performance appraisal, and labor relations. Kuvaas et al. (2020) highlighted that compensation practices are often tied to performance-based incentives. However, in practice, compensation systems are sensitive and must consider objective and subjective conditions. Velghe et al. (2024) argued that performance-based compensation systems depend on contextual and situational analysis, which may limit their impact in certain organizational settings.

Finally, the performance evaluation variable shows a significant positive effect on competitive advantage, with a path coefficient of 0.610, t-statistic of 8.365, and a p-value of 0.000. Thus, the hypothesis is accepted. These findings support the notion that performance evaluation plays a central role in HR development and strategic advantage. Christian and Christian (2020) stated that resource availability positively affects a company's strategic performance, implying that performance evaluation helps sustain HR readiness to achieve goals. Elrehail et al. (2020) emphasized that HR practices significantly influence competitive advantage. A well-structured performance evaluation enhances a company's competitive image and long-term positioning. Potjanjaruwit (2018) found that technological capability and inter-organizational collaboration positively impact startup competitiveness, which in turn boosts performance. Competitive advantage allows organizations to differentiate themselves from rivals and plays a vital role in shaping long-term business strategies and growth.

CONCLUSION

This study reveals that Human Resource (HR) development in the digital era can effectively begin with well-structured planning based on a needs analysis, particularly within the recruitment and selection process. The research findings confirm that recruitment and selection have a positive and significant impact on performance evaluation. Likewise, training and development also exhibit a significant influence on performance evaluation. Furthermore, performance evaluation is shown to positively and significantly affect competitive advantage. However, compensation management, although relevant, does not demonstrate a significant influence on performance evaluation in the context of this study.

Theoretically, these findings contribute to enriching the body of knowledge in HR management by emphasizing the mediating role of performance evaluation in linking HR functions with organizational outcomes, particularly competitive advantage. Practically, the results suggest that organizations should prioritize talent acquisition and development strategies aligned with evolving digital demands. Training programs must be tailored based on job needs and digital competency requirements to support employee performance. Moreover, performance evaluation systems must be systematically implemented to reinforce organizational competitiveness. Despite its contributions, this study has certain limitations. It focuses on private companies within Medan, Indonesia, which may limit the generalizability of findings to other regions or industries. Additionally, the scope is limited to specific HR functions and does not account for the broader dimensions of HR transformation, such as emotional intelligence or cultural adaptability. Future research should explore the role of advanced technologies such as artificial intelligence, digital platforms, and HR analytics in transforming HR development. Moreover, further investigation is needed into the integration of psychological and motor skill enhancement within HR strategies, offering a more holistic approach to building human capital in response to rapid technological change.

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