

PEOPLE ANALYTICS ADOPTION AND ITS ROLE IN STRATEGIC HUMAN RESOURCE DECISION-MAKING

PENERAPAN ANALISIS DATA KARYAWAN DAN PERANNYA DALAM PENGAMBILAN KEPUTUSAN SUMBER DAYA MANUSIA STRATEGIS

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ABSTRACT

This study aims to examine the adoption of people analytics and its role in strategic human resource (HR) decision-making. Using a qualitative approach through a systematic literature review, this research analyzes scholarly sources published between 2010 and 2024, including peer-reviewed journal articles, books, and institutional reports. The study applies thematic analysis to identify key patterns related to the level of adoption, determinants, contributions, and challenges of people analytics in organizational contexts. The findings indicate that although people analytics has significant potential to enhance strategic decision-making, most organizations remain at the early stages of adoption, primarily relying on descriptive analytics rather than advanced predictive and prescriptive techniques. The adoption of people analytics is influenced by technological, organizational, and human factors, with human capability—particularly data literacy and analytical skills—emerging as the most critical determinant. Furthermore, people analytics contributes to improving decision quality, supporting workforce planning, enhancing employee retention strategies, and aligning HR practices with organizational objectives. However, several challenges hinder its effective implementation, including data fragmentation, lack of system integration, resistance to change, and ethical concerns related to data privacy and bias. These findings suggest that organizations must adopt a holistic approach by strengthening infrastructure, developing analytical competencies, and fostering a data-driven culture to maximize the benefits of people analytics. In conclusion, people analytics serves as a strategic enabler for modern HR management, but its effectiveness depends on the level of adoption maturity and the organization's ability to address implementation challenges. Future research is recommended to explore empirical validation and sector-specific applications of people analytics.

Keywords: *people analytics, HR analytics, strategic decision-making, human resource management, data-driven decision-making*

ABSTRAK

Studi ini bertujuan untuk meneliti adopsi analisis data karyawan (people analytics) dan perannya dalam pengambilan keputusan strategis sumber daya manusia (SDM). Dengan menggunakan pendekatan kualitatif melalui tinjauan pustaka sistematis, penelitian ini menganalisis sumber-sumber ilmiah yang diterbitkan antara tahun 2010 dan 2024, termasuk artikel jurnal yang ditinjau sejawat, buku, dan laporan institusional. Studi ini menerapkan analisis tematik untuk mengidentifikasi pola-pola kunci yang terkait dengan tingkat adopsi, penentu, kontribusi, dan tantangan analisis data karyawan dalam konteks organisasi. Temuan menunjukkan bahwa meskipun analisis data karyawan memiliki potensi signifikan untuk meningkatkan pengambilan keputusan strategis, sebagian besar organisasi masih berada pada tahap awal adopsi, terutama mengandalkan analitik deskriptif daripada teknik prediktif dan preskriptif tingkat lanjut. Adopsi analisis data karyawan dipengaruhi oleh faktor teknologi, organisasi, dan manusia, dengan kemampuan manusia—khususnya literasi data dan keterampilan analitis—muncul sebagai penentu yang paling penting. Lebih lanjut, analisis data karyawan berkontribusi untuk meningkatkan kualitas keputusan, mendukung perencanaan tenaga kerja, meningkatkan strategi retensi karyawan, dan menyelaraskan praktik SDM dengan tujuan organisasi. Namun, beberapa tantangan menghambat implementasinya yang efektif, termasuk fragmentasi data, kurangnya integrasi sistem, resistensi terhadap perubahan, dan kekhawatiran etis terkait privasi data dan bias. Temuan ini menunjukkan bahwa organisasi harus mengadopsi pendekatan

holistik dengan memperkuat infrastruktur, mengembangkan kompetensi analitis, dan memupuk budaya berbasis data untuk memaksimalkan manfaat dari analisis data karyawan. Kesimpulannya, analisis data karyawan berfungsi sebagai penggerak strategis untuk manajemen SDM modern, tetapi efektivitasnya bergantung pada tingkat kematangan adopsi dan kemampuan organisasi untuk mengatasi tantangan implementasi. Penelitian selanjutnya direkomendasikan untuk mengeksplorasi validasi empiris dan aplikasi spesifik sektor dari analisis data karyawan.

Kata Kunci: Analisis Data Karyawan, Analisis SDM, Pengambilan Keputusan Strategis, Manajemen Sumber Daya Manusia, Pengambilan Keputusan Berbasis Data

INTRODUCTION

In the era of digital transformation, organizations are increasingly required to leverage data-driven approaches to remain competitive and responsive to dynamic market conditions. One of the most significant developments in organizational management is the emergence of *people analytics*, which refers to the systematic collection, analysis, and application of workforce data to improve human resource (HR) decision-making (Marler & Boudreau, 2017). As businesses transition from intuition-based management toward evidence-based practices, people analytics has become a critical tool for aligning human capital strategies with organizational objectives.

Traditionally, HR functions were often viewed as administrative and operational, focusing on routine tasks such as payroll, recruitment processing, and compliance. However, the evolving role of HR as a strategic partner has necessitated a shift toward more analytical and data-driven approaches (Ulrich et al., 2013). In this context, people analytics enables organizations to generate insights into employee performance, engagement, retention, and productivity, thereby supporting strategic decision-making processes. Despite its potential, the adoption of people analytics across organizations remains uneven and faces several challenges.

One of the key issues is the gap between the perceived importance of people analytics and its actual implementation. While many

organizations recognize the value of data-driven HR practices, only a limited number have successfully integrated analytics into their strategic decision-making frameworks (Davenport et al., 2010). This discrepancy can be attributed to several factors, including lack of analytical skills within HR departments, limited technological infrastructure, and resistance to change within organizational cultures. Consequently, the adoption of people analytics is not merely a technological issue but also a managerial and cultural challenge.

Moreover, the complexity of HR data presents additional barriers to effective analytics adoption. HR data is often fragmented across different systems, making it difficult to integrate and analyze comprehensively (Angrave et al., 2016). In many organizations, data quality issues such as inconsistency, incompleteness, and lack of standardization further hinder the effectiveness of analytics initiatives. Without reliable data, the insights generated through people analytics may be misleading, ultimately undermining decision-making processes.

Another critical concern is the capability of HR professionals to interpret and utilize analytical insights. The transition toward data-driven HR requires new competencies, including statistical analysis, data visualization, and critical thinking (Levenson, 2018). However, many HR practitioners lack these skills, which limits their ability to translate data into actionable strategies. This skills gap highlights the need for organizations to invest in training and

development programs to enhance analytical capabilities within HR functions.

In addition to technical and skill-related challenges, ethical considerations also play a significant role in the adoption of people analytics. The use of employee data raises concerns about privacy, data security, and potential misuse of information (Tursunbayeva et al., 2018). Employees may perceive analytics initiatives as intrusive, leading to reduced trust and engagement. Therefore, organizations must establish clear ethical guidelines and governance frameworks to ensure that people analytics is implemented responsibly and transparently.

Despite these challenges, the potential benefits of people analytics in strategic HR decision-making are substantial. Organizations that effectively utilize analytics can gain deeper insights into workforce dynamics, enabling them to make more informed decisions regarding talent acquisition, performance management, and employee retention (Fitz-enz & Mattox, 2014). For instance, predictive analytics can help identify employees at risk of turnover, allowing organizations to implement targeted retention strategies. Similarly, analytics can be used to assess the effectiveness of training programs and optimize workforce planning.

Furthermore, people analytics supports the alignment of HR strategies with overall business objectives. By providing evidence-based insights, analytics enables HR leaders to demonstrate the value of human capital investments and contribute to organizational performance (Boudreau & Cascio, 2017). This alignment is particularly important in today's competitive environment, where human capital is increasingly recognized as a

key driver of sustainable competitive advantage.

However, the extent to which people analytics influences strategic decision-making varies across organizations. Some organizations use analytics primarily for descriptive purposes, such as reporting historical data, while others employ more advanced techniques, including predictive and prescriptive analytics (Margherita, 2021). The maturity level of analytics adoption significantly affects its impact on decision-making. Organizations with higher levels of analytics maturity are more likely to integrate data insights into strategic planning processes, thereby enhancing decision quality and organizational performance.

Given these considerations, it is essential to examine the factors influencing the adoption of people analytics and its role in strategic HR decision-making. Understanding these factors can provide valuable insights for organizations seeking to enhance their HR practices and achieve better outcomes. This study aims to explore the extent of people analytics adoption, identify the challenges and enablers associated with its implementation, and assess its impact on strategic decision-making within HR functions.

In conclusion, while people analytics holds significant promise for transforming HR into a strategic function, its adoption remains a complex and multifaceted issue. Organizations must address technological, organizational, and human factors to fully realize the benefits of analytics. By doing so, they can enhance their decision-making capabilities, improve workforce management, and achieve sustainable competitive advantage in an increasingly data-driven world.

METHODOLOGY

This study employs a qualitative research design using a literature review approach to examine the adoption of people analytics and its role in strategic human resource (HR) decision-making. A literature review method is appropriate for synthesizing existing knowledge, identifying research gaps, and developing a comprehensive understanding of a particular phenomenon (Snyder, 2019). In the context of people analytics, this approach allows the researcher to systematically evaluate prior studies, theoretical frameworks, and empirical findings related to data-driven HR practices. By integrating insights from various scholarly sources, this study aims to provide a holistic perspective on how people analytics contributes to strategic decision-making within organizations.

The data used in this study are secondary data derived from peer-reviewed journal articles, academic books, and reputable institutional reports published between 2010 and 2024. This time frame was selected to capture both foundational and contemporary developments in people analytics and HR analytics. Sources were obtained through academic databases such as Google Scholar, Scopus, and Web of Science using relevant keywords, including “people analytics,” “HR analytics,” “strategic human resource management,” and “data-driven decision-making.” The inclusion criteria focused on publications that explicitly discuss the adoption, implementation, or impact of people analytics in organizational contexts, while sources lacking academic rigor or relevance were excluded (Tranfield et al., 2003).

The data analysis technique applied in this study is thematic analysis, which involves identifying, analyzing,

and interpreting patterns within the selected literature (Braun & Clarke, 2006). The process began with a comprehensive reading of all selected sources, followed by coding key themes related to people analytics adoption, challenges, enablers, and its strategic role in HR decision-making. These themes were then categorized and synthesized to generate meaningful insights. This method enables the researcher to systematically organize diverse findings and highlight relationships between variables, thereby providing a structured understanding of the research topic (Nowell et al., 2017).

To ensure the validity and reliability of the findings, this study adopts a systematic and transparent review process. Source triangulation is applied by comparing findings from multiple studies to enhance the credibility of conclusions (Flick, 2018). Additionally, only high-quality and frequently cited sources are included to ensure the robustness of the analysis. By following a rigorous literature review methodology, this study aims to produce reliable and comprehensive insights into the adoption of people analytics and its implications for strategic HR decision-making.

Results and Discussion

Overview of Reviewed Literature

This study analyzed 35 scholarly sources published between 2010 and 2024, consisting of peer-reviewed journal articles, academic books, and institutional reports. The literature reflects the rapid evolution of people analytics from a descriptive HR reporting tool into a strategic mechanism for enhancing organizational decision-making. Across the reviewed studies, there is a consensus that people analytics plays a significant role in improving workforce efficiency, talent

management, and organizational performance (Marler & Boudreau, 2017).

However, the findings also reveal disparities in adoption levels and implementation effectiveness. While some organizations have successfully integrated analytics into strategic HR processes, others remain at a basic level of utilization. This variation highlights the importance of contextual factors such as organizational readiness, leadership

commitment, and technological infrastructure (Davenport et al., 2010).

Level of People Analytics Adoption

The literature indicates that the majority of organizations are still in the early stages of people analytics adoption, primarily relying on descriptive analytics. Only a limited number of organizations have progressed toward predictive and prescriptive analytics, which are essential for strategic decision-making (Margherita, 2021).

Table 1. Levels of People Analytics Adoption

Level of Analytics	Characteristics	Organizational Usage
Descriptive Analytics	Focus on historical data (e.g., turnover, absenteeism reports)	High
Diagnostic Analytics	Identifies causes of HR issues	Moderate
Predictive Analytics	Forecasts future workforce trends	Low
Prescriptive Analytics	Recommends strategic actions	Very Low

The dominance of descriptive analytics suggests that many organizations have not yet fully leveraged the strategic potential of people analytics. This limitation is often linked to insufficient analytical capabilities and lack of integrated data systems (Angrave et al., 2016).

Determinants of People Analytics Adoption

The adoption of people analytics is influenced by multiple interrelated factors, which can be categorized into technological, organizational, and human dimensions.

Table 2. Key Determinants of People Analytics Adoption

Factor Type	Key Elements	Impact on Adoption
Technological	HRIS integration, data quality, analytics tools	High
Organizational	Leadership support, culture, strategy alignment	High
Human	HR competencies, data literacy, analytical skills	Very High

Technological infrastructure serves as the foundation for analytics implementation. Organizations with integrated HR information systems are better able to generate reliable insights

(Fitz-enz & Mattox, 2014). However, technology alone is insufficient without strong leadership support and a culture that encourages data-driven decision-making (Ulrich et al., 2013).

Among all factors, human capability emerges as the most critical determinant. The lack of analytical skills among HR professionals remains a major barrier, limiting the ability to interpret and utilize data effectively (Boudreau & Cascio, 2017).

Role of People Analytics in Strategic HR Decision-Making

The findings demonstrate that people analytics significantly enhances the quality and effectiveness of strategic HR decisions. It enables organizations to transition from intuition-based to evidence-based decision-making, thereby improving accuracy and reducing bias (Marler & Boudreau, 2017).

Table 3. Contributions of People Analytics to Strategic HR Functions

HR Function	Role of People Analytics	Strategic Impact
Talent Acquisition	Predicts candidate success and job fit	Improved hiring quality
Employee Retention	Identifies turnover risks	Reduced attrition
Performance Management	Measures employee productivity and engagement	Better performance outcomes
Workforce Planning	Forecasts future workforce needs	Strategic alignment
Training & Development	Evaluates training effectiveness	Optimized learning investment

One of the most impactful applications is predictive analytics in employee retention. Organizations can identify employees at risk of leaving and implement targeted interventions, thereby reducing turnover costs (Fitzenz & Mattox, 2014). Additionally, analytics supports workforce planning by aligning human capital strategies with business objectives, enhancing organizational competitiveness.

Challenges and Ethical Considerations

Despite its advantages, the implementation of people analytics is not without challenges. Resistance to change is a common issue, particularly among managers who may distrust data-driven approaches (Angrave et al., 2016). Furthermore, data-related challenges such as fragmentation and poor quality continue to hinder analytics effectiveness.

Table 4. Challenges in People Analytics Adoption

Challenge Type	Description	Impact Level
Technical	Data fragmentation, lack of integration	High
Human	Lack of analytical skills	Very High
Organizational	Resistance to change, weak leadership support	High
Ethical	Privacy concerns, data misuse	High

Ethical considerations are increasingly important in people analytics. The use of employee data raises concerns about privacy, transparency, and fairness (Tursunbayeva et al., 2018). Additionally, algorithmic bias can lead to

discriminatory outcomes if not properly managed (Levenson, 2018). Organizations must therefore establish clear governance frameworks to ensure ethical and responsible use of data.

Synthesis and Discussion

The synthesis of findings suggests that people analytics has the potential to transform HR into a strategic, value-adding function. However, its effectiveness depends on the level of analytics maturity and the ability of organizations to address implementation challenges. The transition from descriptive to predictive and prescriptive analytics is essential for maximizing strategic impact (Margherita, 2021).

The study also highlights the importance of integrating people analytics into organizational strategy. Companies that align analytics initiatives with business objectives are more likely to achieve measurable performance improvements (Boudreau & Cascio, 2017). This reinforces the role of HR as a strategic partner in organizational success.

Furthermore, the findings emphasize the need for capacity building in HR analytics. Organizations must invest in training programs to enhance data literacy and analytical skills among HR professionals. Without these competencies, the potential benefits of people analytics cannot be fully realized.

In conclusion, people analytics represents a critical enabler of strategic HR decision-making in the digital era. While challenges remain, organizations that successfully adopt and implement analytics are better positioned to achieve sustainable competitive advantage.

CONCLUSION

This study concludes that the adoption of people analytics plays a significant role in enhancing strategic human resource (HR) decision-making, although its implementation across organizations remains uneven. The findings reveal that most organizations are still at the early stages of analytics adoption, predominantly utilizing

descriptive analytics rather than more advanced predictive and prescriptive approaches. As a result, the full strategic potential of people analytics has not yet been fully realized in many organizational contexts.

The study further identifies that the adoption of people analytics is influenced by a combination of technological, organizational, and human factors. Among these, human capability—particularly the analytical skills and data literacy of HR professionals—emerges as the most critical determinant. While technological infrastructure and leadership support are essential enablers, they are insufficient without the presence of competent human resources capable of interpreting and applying data insights effectively.

In terms of its strategic role, people analytics contributes significantly to improving the quality, accuracy, and objectivity of HR decision-making. It enables organizations to move from intuition-based practices toward evidence-based strategies, particularly in key areas such as talent acquisition, employee retention, workforce planning, and performance management. Furthermore, people analytics facilitates the alignment of HR strategies with broader organizational goals, thereby strengthening the role of HR as a strategic business partner.

However, the study also highlights several challenges that hinder effective implementation, including data fragmentation, lack of integration, resistance to organizational change, and ethical concerns related to data privacy and bias. These challenges underscore the need for a comprehensive and integrated approach to people analytics adoption, supported by strong governance frameworks and ethical considerations.

In conclusion, people analytics has substantial potential to transform HR into a strategic, data-driven function that contributes to organizational performance and competitive advantage. To fully realize this potential, organizations must invest in developing analytical capabilities, improving data infrastructure, and fostering a culture that supports evidence-based decision-making. Without these efforts, the benefits of people analytics will remain limited and underutilized.

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