



From Human Intuition to Data Intelligence: Rethinking Talent Management through HR Analytics

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Abstract:

The increasing availability of data and the development in analytics are prompting a big change in HRM, especially when it comes to Talent Management. In this endeavor, an analysis of the implications of HR Analytics in Talent Management from a theoretical point of view has been addressed with a special focus on explaining the possible benefits and difficulties of data-driven tools in the context of talent management. This study engages with a systematic literature review using conceptual and empirical based research on HR Analytics and Talent Management, predominantly from 2010 – 2025. In this study, Peer reviewed journal articles, Conference papers and pertinent literatures with respect to Talent Management (TM), HR Analytics (HRA) and Data Driven Culture in the organizations are covered. The research looked at the potential impact of HR Analytics on Talent Management on how a data driven culture underpinned by technology could impact Talent management from an organization perspective, hence developing of a conceptual framework.

This paper is centered on HR Analytics, Talent Management and its impact on organizational performance. The study findings revealed that HR Analytics has significantly increased the role of Talent as a legitimate representation to performance measurement and the competitive work factor. It also serves to support the leaders and decision makers on acquisitions, staff training, rewards, recognition, talent pipeline management and employee retention for superior organizational performance. It is essential to recognize that metrics should be utilized as KPIs wherever feasible to evaluate the performance of both talents and the business as a whole. This article intends to help recruiting managers and decision-makers leverage HR Analytics in talent management that could revamp the way organizations approach their talent and improve the outcome. HR analytics provides companies with information about important HR metrics such as employee engagement, turnover, and workforce diversity while enabling management to make evidence-based decisions on their talent policies.

Keywords: HR Analytics, Talent Management, Data-driven approaches, Data Intelligence, Talent development, Competitive edge.



1. Introduction

1.1 Background

Talent Management has been started from ages as found evident in various studies, books and literatures. Talent Management is still glowing. Post pandemic and being the contemporary world getting digitized, technology has been uniformly propagating and developing everywhere such as every field of study around us and as a vital part in human's personal or professional lifestyle. This tectonic shift is altering how organizations get organized and changing the mindset of top end executives and managers from doing business the traditional way to making technology one of their most vital resources for doing well in business that counts towards them. That's where the new age of HR Analytics begins.

HR analytics is one of the most credible sources of statistically significant data and evidence for creating new innovations in delivery contexts of HR policies and activities (Mohammed, 2019). HR now becomes relevant to an emerging trend of big data that is providing clear answers to the organization's future, in today's context. A shift from static HR approaches to real-time integration and dashboard-based analytics has occurred in the last several years. Those implementations are used in ATS (Applicant Tracking System), recruitment, performance management, L&D and employee wellbeing and more.

As per findings from Marler and Boudreau (2017), HR Analytics encompasses many technology-enabled processes that utilize descriptive, visual, and statistical methodologies to analyze personnel data and human resource practices.

1.2. Objective of the study

This study aims to explore and explain the significance of using HR Analytics on Talent Management by fostering a data-driven culture from an organizational standpoint. Specifically, the study aims to:

- Explore the relationship between HR Analytics and Talent Management drives
- Explore the role of a data-driven culture in translating analytics insights into actionable HR practices, and
- Assess the influence of analytics-driven decision-making and strategic outcomes.

2. Research Methodology

This is a reviewed article that has examined the topic of Talent Management and HR Analytics and their interconnected implications. This study has encompassed 50 + research publications, journal papers, books, and articles pertaining to the concepts of Talent Management, HR Analytics, and data-driven culture within various sectors. Only those studies are included that have examined HR analytics as a strategic enabler of talent management or organizational performance. Non-English papers, and dissertations were excluded.

2.1 Procedure for Analysis

A systematic review methodology was used in this study to compile more than fifty academic publications on talent management (TM) and human resource analytics (HRA) on which major was released between 2010 and 2025. The terms "HR analytics," "talent management," and "data-driven culture" were used to find pertinent literature in databases including Scopus, Web of Science, and Emerald Insight. Priority was given to studies that concentrated on developing economies, especially those in Nepal, India, and Malaysia, in order to capture regional viewpoints. Three dimensions: data-driven culture, talent outcomes, and analytics maturity were used to thematically examine the chosen articles. In order to guarantee analytical rigor and contextual credibility, a comparative interpretation between Western and Asian contexts was carried out and confirmed against recognized frameworks and regional HRM studies along with pertinent literatures.

3. Review of Literature

Over the past few years, the Human Resources (HR) field has undergone a significant shift towards the adoption of analytics to make data-informed decisions. The area of talent management has received much attention in HR analytics. The goal of the literature review is to reflect on HR analytics and its impact on talent management in a data-focused manner and provide an overview of what has been done and is being done in these areas. Human Resources has slowly been moving from intuition to evidence. One of the most obvious examples of this change is the increasing adoption and application of HR (people) analytics to give decision makers timely and evidence-based information about their talent. And nowhere is this more evident than in talent management, where analytics are providing the data that can transform how companies hire, develop, engage and retain people.

3.1 Talent Management: from idea to integrated system

The term "Talent" in its modern application derives from the esteemed 2001 article "The War for Talent." The phrase "war for talent" was introduced by Steven Hankin of McKinsey & Company in 1997 and then expanded upon in a book by Ed Michaels, Helen Handfield-Jones, and Beth Axelrod, published by Harvard Business Press in 2001. Talent is an innate ability or extraordinary skill of an individual to perform things with ease. Talent management involves sustainable organizational strategies that utilize human capital for competitive advantage, along with a suite of integrated HR operations designed to match individuals with the necessary competencies to the appropriate role, location, and cost. This notion appears to be widely recognized and adopted by contemporary worldwide and creative companies. As talent management increasingly becoming a common place term in HR practice, academic scholars are now endeavoring to carefully arrange the literature and recognize it as a legitimate subject of study.

Current concerns about "talent" more recently emanate from McKinsey's war for talent research followed by a best-selling book that presents higher-order talent as an enduring competitive advantage (Michaels et al., 2001) (also, an earlier paper written by Chambers et al., 1998). Since that time, talent management has evolved from a series of HR activities to an organization-wide process and system that integrates staffing, development, performance, succession planning and rewards into business objectives. In reality, this integration wants a simple sentence: have the right people in the right roles with the right skills at right time and cost.

3.2 HR Analytics – Concept and its significance

HR Analytics is a notable advancement within the broader domain of Human Resource Management. It is commonly referred to as people analytics, talent analytics, or workforce analytics. It's the application of data and statistical methods to build insights, make decisions, and drive value related to managing an organization's human capital. It is a process involving the gathering, scrutiny, and interpretation of data related to HR in order to enhance various talent management processes such as recruitment, evaluation of performance, training and development, and succession planning.

Mondore, Douthitt and Carson (2011) generated a six-stage model within their HR analytics study. The roadmap guides the integration of HR Analytics in line with the HR strategy and company aims. The results indicate a number of stages, namely, to identify key HR-metrics, prepare an integrated data plan for targeted application areas, set up monitoring efforts for critical outcome metrics introduced by emerging technologies, draft and operationalize the strategic plan, measure and fine-tune following implementation and further adjust.

Currently, researchers are focused on quantifying the value and efficacy of HR activities to equip HR practices and processes with tools that enhance decision-making and reinforce their connection to the organization's core functions and strategies through HR metrics and statistical models. This is where HR Analytics assumes its function. HR Analytics is significant as it empowers firms to make evidence-based strategic business choices, ultimately facilitating talent management and enhancing organizational performance.

3.3 Types of HR Analytics

In current HR practice, analysis is classified into three levels, with each one growing out from the last and producing a richer level of understanding (CIPD, 2025; Boatman, n.d.). Older frameworks of Watson, 2010 and

Narula, 2015 distinguished only three types descriptive, predictive and optimization but the typology has advanced in recent work to consider optimistic and prescriptive analytics. The following are a modernized version of these levels:

a. Descriptive Analytics

At its most basic form, descriptive analytics provides HR professionals with insight regarding what has happened already. It involves historic sense like how many employees are we up to, how much turnover, the absentee numbers, cost per hire and such. On this stage, HR practitioners generate meaning from comparison information through dashboards, scorecards, drill-down reports, ad-hoc queries and visualization tools using baseline metrics (CIPD, 2025). Descriptive analytics doesn't explain why things happened.

b. Predictive Analytics:

The next step is above and beyond history. Predictive analytics imposes the question of what is to come? From statistical models, pattern recognition, decision trees and forecasting HR can calculate the likelihood that certain future events will happen. For e.g. risk of attrition or readiness for promotion or candidate's success ratio (Boatman & Justworks, 2024). In fact, this is a way of making patterns in past behavior into future-looking insight that HR managers can actually take action on.

c. Optimization / Prescriptive Analytics:

At the most advanced level of sophistication is optimization or prescriptive analytics. It predicts a range of possible outcomes and tells how to get there under constraint. For prescriptive analysis, leaders use linear programming, simulation and scenario modeling, as well as optimization algorithms to determine how to allocate scarce resources (e.g. training budgets and headcount) for maximum impact (CIPD, 2025; Boatman; n.d.). Another example could be a company could test multiple training assignment methods and choose the best one that minimizes performance and decreases cost.

4. Results and Discussion from Findings

HR analytics and talent management have become a reality, and it is changing the way society thinks about managing the workforce. The findings of this paper supports that an embedded analytics approach to talent processes can make HR less reactive and more proactive. This is done by finally getting a handle on HR that is unseen or intuitive or the way things have always been done. This results in forming patterns out front to see HR performance, anticipate risks & insights, and guide interventions with evidence. Furthermore, the findings from the study shows various positive impacts on integration of HR Analytics with Talent Management as follows:

4.1 Data-Driven Culture in HR:

In today's world, the need for high-performing talent has always been demanding and ever growing but it has never been easy in any field or industries. This has created a need for leveraging data analytics in practice. There are always several benefits on adopting data driven culture, not only in HR but in every domain and stream all around. Through the data-driven culture in decision making, HR leaders will be in a better position to hire, retain, utilize and develop their workforce.

People Analytics requires providing value. Boudreau and Ramstad in their study have identified that in order to create this value with HR analytics, an organization needs to be able to support Talent Management decisions by data and measure the efficiency, effectiveness and impact of HR practice. The hardest thing to do is establish a data-driven culture in every spectrum of HR i.e., from hiring to Talent Management to talent performance, workforce planning and talent engagement and retention. Some of the questions that could be and has been addressed by HR leaders, as they shape Data-driven culture includes but not limited to:

- Building perspective of HR leaders on thinking about the role of usage of analytics in HR functions
- Prioritizing key areas of business and the need to focus on data for those areas

- Establishing data first culture mindset
- Developing data analytics skills to understand and appropriately leverage the true value of analytics
- Using data in HR function to move from analytics to insights, and use them for predictive outcomes

In one of the studies, The Deloitte Human Capital Trends report 2017 indicates that 85% of HR leaders in Asia and 81% in Oceania consider analytics a high priority for their organizations. Similarly, LinkedIn data for the Asia Pacific region reveals a 70% increase in HR analytics professionals over the past five years. These are the best and brightest in human resources analytics today. As a result, job titles like Data Scientist, Talent Analytics Director, and Diversity Analytics Specialist have emerged among others. This means customers find this through activities and behaviors of enterprise corporations using analytics. Even in a Least Developed Country (LDC) like Nepal, multinational companies such as Surya Nepal Limited, Dabur Nepal Ltd., and Banking and Financial Institutions (BFIs) have adopted data-driven decisions in their talent management and HR functions.

4.2 Data and Technology Driven Organizations: A competitive edge

Today, the business environment is extremely competitive and driven by technology. Modern enterprises would use technology for managing the personnel, automating HR practices, had less manual work and even competitive. They've used HRIS (Human Resource Information System), modern HR software, Applicant Tracking Systems (ATS) and quite a few of the best HR dashboards in all sorts of places around the world. As a result, a rigorous system is necessary to evaluate the impact of HR analytics on effective Talent Management outcomes enabled by use of data based organizational culture.

Through talent analytics, decision making process of HR becomes more effective that leads to efficient talent management and HR managers can take strategic control over HR functions (Kaur and Fink, 2017; Rana et al., 2019; Grillo, 2015). The evidence base for HR Analytics is a potential source of competitive advantage in organization's growth. This study is supported by work of Ishtiaq & Khan (2024) who claim that talent management acts as a mediator between HR Analytics and organizational performance/competitive advantage to support the fact that HR Analytics has a positive impact on competitive advantage when there are innovative processes in talent management occurred.

Another conclusion drawn from resource-based view (RBV) theory also holds that HR Analytics-generated competences, such as data analysis and predictive insights competencies, are built upon to resources when they are combined with internal HR processes (i.e. talent acquisition, development and retention) through which these competences are utilized. So, HR Analytics is all about insights and prediction and Talent Management is more about taking and executing on the insights to retain and keep workforce engaged so that a firm has a competitive edge.

4.3 Comparative Views: Adoption in Developed and Developing Countries

a. Maturity and adoption trends of HR Analytics

There is substantial evidence of people analytics into the space that separates the western and developing countries. The results indicate significant variation in organizations' adoption of HR Analytics (HRA) across regions, highlighting the novelty and contextual nature of this study. In Western economies, people analytics has progressed from basic dashboard to predictive and prescriptive modelling underpinned by sophisticated HRIS integration and AI enhanced tools. Data governance frameworks and analytics enabler infrastructures lend to the robustness of these ecosystems (Marler & Boudreau, 2017). In comparison, emerging economies in South and Southeast Asia such as Nepal, India and Malaysia are not much advanced in analytics maturity and their adoption is still hampered by fragmented data systems, low degree of analytics literacy, volatile regulatory frameworks (Cooke et al., 2020). HR analytics practiced in North America and Western Europe has evolved beyond to merely descriptive reporting to predictive / prescriptive solution with governance such as GDPR aligned data policy and embedded into HRIS stack. In addition to highlighting limitations, it causes disparities in impact among organizations such as skill deficits and

problem framing, pivotal reviews highlight the increasing integration of statistical modeling and AI/ML in hiring, performance, and retention decisions (Marler & Boudreau, 2017; Angrave et al., 2016).

Moreover, the theory and empirical research on AI in HRM in Asia underscores the necessity of intentional governance development to avoid “tech-first” misfits, especially as many organizations are currently incorporating diagnostic and predictive capabilities (Budhwar et al., 2022; Budhwar et al., 2023).

The study also found out the maturity gap between developing and developed world. The maturity gap shows up in the literature i.e. compared to conceptual work; empirical studies are still proportionally few in number. For example, a systematic review found 34 (about 43 %) out of the 79 HRA papers to be empirical research and emphasized the necessity of more context-sensitive comparative effect testing (Álvarez-Gutiérrez et al., 2022). Emerging markets generate strategic alignment and capability development under constraints such as skills, data quality and regulatory clarity whereas in many western contexts, the preference is for automation and scale like Machine Learning driven screening, attrition and predictions. In the adoption pathways, institutional and legislative context also appears to matter as much as technology including formalities on labor market and data protection (Cooke et al., 2020; Budhwar et al., 2022).

b. Balancing Human Judgment and Data-Driven Decision Making

The study finds that performance improvements along real data implementation has been major challenge for balancing human judgements with data driven decision making. A failure to apply contextually sensitive judgment and strategy is a frequent culprit in HR that finds it impossible to move from model into habit. literature suggests that HR is frequently unfulfilled by the limited capacity to translate models into trustworthy, action-oriented decisions (Angrave et al., 2016; Marler & Boudreau, 2017).

Drawing on a frequently referenced ethical analysis, algorithmic HR-decision procedures may turn ethics from being something compliance with into something involving personal integrity; transparent model governance, critical literacies for data, and participatory design become necessary (Leicht-Deobald et al., 2019). In order to build trust, the Asian HRM syntheses urged that analytics should be covered with ethical frameworks, manager upskilling and dialogic deployment (Cooke et al., 2020; Budhwar et al., 2022).

Kyaw (2025) underscored that it is important to follow evidence-based practices for strategic HRM in Thai healthcare organizations, taking into consideration local workforce norms and leadership structures. Aung, Min, and Liana (2025) also underlined that sustainable Organization Culture in Myanmar requires adjustments of the analytical frameworks based on cultural expectations regarding collectivism and professional loyalty. These regional perspectives highlight that adoption of HR Analytics from Western templates is not feasible and requires cultural alignment, adjustment and capability building so as to ensure integrity and strategic relevance locally.

4.4 Lessons and Considerations on Integrating HR Analytics into Talent Strategy:

- i. Evidence based decision is not just the norm for HR:** a typical debate is HR analytics facilitates evidence-based management, rather than providing the insecure grasp-intuition-driven management. Analysis let explore patterns such as which talent is flowing, how performance dynamics are playing out and who's going where and at what risk. HR analytics suggests that using analytics is better at diagnosing current workforce challenges and aligning those with the business (Zebua et al, 2024).

Consequently, analytics serves as a medium between HR's day-to-day behavior (e.g., recruitment, training and retention) complimenting the sense of wider organizational consequences of those types of behavior to the business. This helps in contributing credibility in terms of the strategic role that HR can play in connecting why, how and when analytics is made by HR, that can make clear visible changes (Emerald, 2024).

- ii. **Analytics-enriched reimagination of key talent management areas:** The various literatures consistently shows that analytics has the greatest impact when applied across multiple talent dimensions. Below is a synthesis of how analytics is reshaping each area:

a. **Talent acquisition & recruitment:**

Analytics enables organizations to mine historical hiring data and find success patterns like skills, backgrounds, source channels and apply predictive models to gauge future hiring demand. A review study on HR analytics in talent acquisition revealed that when organizations use analytics, improvements are experienced with respect to efficiency, selection quality, and long-term strategy fit (Vadithe & Kesari, 2022).

b. **AI-powered screening and matching tools:**

Technology can reduce time-to-fill, flag more of the candidates that are likely to succeed on the job, which also increases the likelihood of hiring right-fit talent. (Vhora et al,2025))

c. **Performance, development & predictive analytics:**

Equipped with performance data and predictive models, HR can tell the employees most likely to highlight those areas that needs development, and who would benefit from stretched roles. This predictive approach supports early intervention before problems develop. Predictive analytics in HR - A new report on predictive analytics in HR outlines how these methods help retention, engagement, and targeted development strategies (Sammu & Joy, 2024).

Some of the biggest companies are now using hybrid models that include clustering, machine learning and/or rules-based logic to segment employees into risk profiles, which they then apply personalized development paths (Shafi et al, 2024).

d. **Retention, succession & internal mobility:**

Research demonstrates that predictive models yield higher retention rates and better succession pipelines when integrated with contextual factors (HR Analytics for Predictive Talent Management, 2025). Further, analytics enables succession planning and internal mobility as it identifies hidden leadership potential, matches career paths to business objectives and demystifies the “black box” nature of promotions. Predicting mobility and career switch behavior empowers HR to better navigate talent.

e. **Maturity levels through the adoption of HR Analytics:**

Not every enterprise is making the best use of analytics. The literatures have identified multiple levels of maturity in the adoption of HR analytics ranging from descriptive and predictive to prescriptive functions (also called optimization). As per the study on ‘The return of HR analytics, 2024’, most businesses for HR analytics are in their infancy stage. Some results indicate that it’s not even enough to have the analytics technology in place. The issue is what to think about this kind of results which relates to manager practices and decision-making systems if one wants to integrate knowledge on management’s strategies related (Patil et al, 2024).

In addition, other recent research in organizational behavior has reported rise to and have recently provided evidence of employees’ perceptions that the use of analytics is related to predicting and explaining key outcomes such as creativity and innovation.

iii. **Emerging enablers of HR Analytics:**

The ongoing evolution of HR analytics trends indicate that big data and artificial intelligence are being seamlessly introduced into companies, not only giving them a powerful asset for talent management but also posing new challenges in areas like quality, scalability, and ethics. Success today will require integration of tech capability with good governance, trust and responsible data use, which is described as enablers below:

a. Integration of new technologies & Scalability:

Big HR data and analytics no longer is limited in its space to structured sources like HR system logs or social platforms only. It is more about big data and authentic data. This raises several problems like, integration challenge, quality of data problem in unstructured data management and so on that act as implications. (Jayalakshmi & Prabakaran, 2024)

b. AI driven process usage:

AI-based people analytics is also fast gaining ground. Solutions and functions including resume screening, sentiment analysis, predictive & adaptive learning models have already brought time-to-hire down, got more accurate assessments done and made employees happier in many companies.

c. Potential hazards:

Algorithmic discrimination, lack of transparency in decision-making, invasion of privacy and over-reliance on 'black box' models are the reasons that should not be ignored. It's not about how big or procured your technology is, it's really about the right degree of transparency and trust around the usage of data.

This study illustrates how HR analytics can evolve human resources from being a business consumer into a true partner, one where those making talent decisions do so, not on gut feeling, but with the support of empirical facts. Applying analytics to every aspect of talent management such as hiring, development and retention generate a stronger system. Organizations tend to begin with the descriptive data first, then after progressing to predicting outcomes, and ultimately proceed to more advanced decision guiding analytics which requires steady investments in people, tools and processes. Yet at the same time, human judgment should be kept at the center and make sure that the data and technology are used fairly, ethically and with real understanding of people and context.

In brief, HR analytics gives rise to talent management, in that the use of HR analytics is transforming talent management from a reactive action where it is siloed, into an anticipatory and integrated competency. The findings reveal that there is increasing evidence in support of the benefits for recruiting, performance management, retention and mobility from data analytics if maturity, governance and culture are invested by the organizations.

4.5 Challenges in integrating HR Analytics and Talent Management

Every coin has two side, likewise, integrating HR analytics on Talent Management also have pros and cons. As said by Snell and Bohlander (2017), the importance of having a clear understanding of the business goals before implementing HR analytics is very essential. If there is no proper understanding, it may backfire the organization with opportunity loss, financial challenges and unproductive outcomes.

There are some challenges associated with using HR analytics for talent management. Kiron and Lebowitz (2013) identified three key challenges: data quality, data privacy, and the skills gap.

- **Data quality:** The eminence of the data used for HR analytics is crucial. If the data is not accurate or complete, the results of the analytics will be unreliable.

- Data privacy: HR analytics can raise concerns about data privacy. Organizations need to ensure that they are collecting and using data in a way that respects employee privacy.
- Skills gap: There is a skills gap in the HR profession when it comes to using HR analytics. Many HR professionals do not have the skills or training necessary to use HR analytics effectively.

4.6 Proposed Conceptual Framework

Building from the reviewed literatures and findings discussed above, a conceptual framework has been developed by the author himself and proposed for further study:

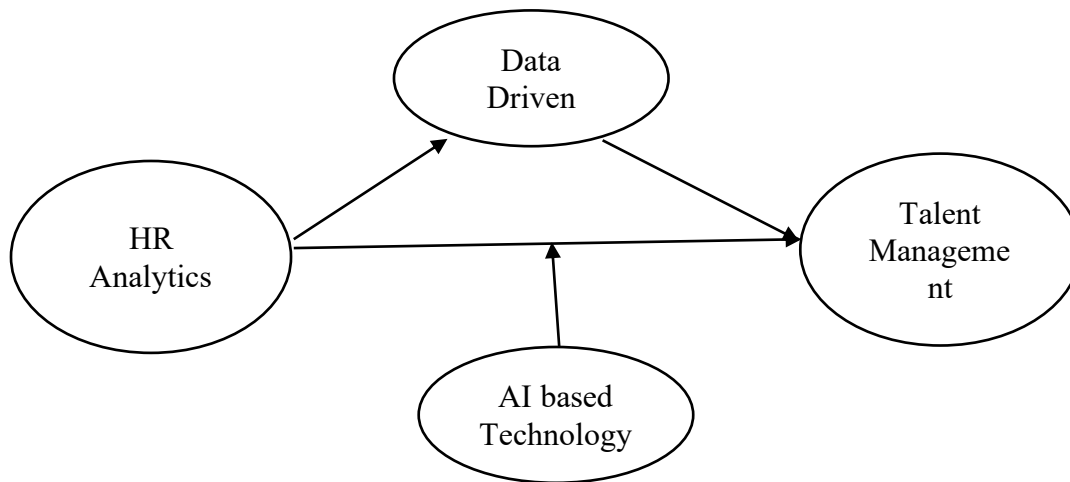


Figure 1: Framework on integration of HR Analytics, Data-Driven Culture, and Talent Management

The proposed model as shown in figure above illustrates how HR Analytics acts as a strategic stepping-stone towards successful Talent Management and that this connection is mediated by Data-Driven Culture.

In this proposed model, HR Analytics is used as the predictor variable and denotes the application of descriptive, predictive and prescriptive analytics for informing evidence-based HR decision-making using workforce-level insights (Marler & Boudreau, 2017). The analytics tools would make it possible for organizations to find, recruit and develop high-potential employees.

Data-Driven Culture serves as mediating variable as it mediates the relationship between insights and actionable HR practices by developing trust in data, analytical capabilities, leader support for making data-driven decisions (Budhwar et al., 2022). This intermediary guarantees that analytics become embedded in HR processes. AI-based Technology acts as a moderating variable, reflecting the growing role of artificial intelligence in enhancing HR Analytics and Talent Management integration.

Lastly, Talent Management Effectiveness is the Dependent Variable, and it covers the effectiveness of areas such as recruiting, developing and retention or alignment of HR strategies with organizational goals (Cooke et al., 2020).

5. Conclusion

HR Analytics is coming up as a prevalent practice in the HR fraternity that advocates strongly on objectivity rather than subjectivity in HR practices. Therefore, this study emphasized to understand the implications and usage of HR Analytics on managing talent and understanding the effect it plays in the improvement of Talent Management practice through data-driven organization culture.

Establishing a data-driven culture across every function of HR seems complex and challenging part but it's leaping to strong need and possibility in almost all the industry. HR Analytics seems highly credible for managing talent for their growth, development, and succession planning because it provides statistically valid data and evidence which can be used in the process of developing new HR and business strategies. It also seems essential that advocating the use of HR Analytics is singly not sufficient for making the strategic decisions of the organization, rather cultivating data-driven culture is highly significant to support its implications on the organization.

This is also supported from research by Aung et al, 2025 that When HR Analytics is integrated with business strategy, it moves beyond reporting to become a predictive engine for talent pipelines and workforce planning, echoing emphasis on strategic HR contributions to organizational sustainability.

Thus, From the reviewed literature, it is concluded that HR Analytics adoption for Talent Management has been found essential for organizations as its implications seem to well benefit the organizations for managing talents to shape their business accordingly.

6. Contribution to knowledge

This paper is expected to be one of the major contributions in the area of HRM investigating the scope of HR Analytics for talent management in an organizational context. The adoption of Human Resource Analytics in South and Southeast Asian developing nations, where analytical capabilities and digital transformation are still in their infancy, is contextualized in this paper, expanding the field's, compared focus on Asian and developed countries. Unlike established Western systems where algorithmic accuracy and governance dominate business practices (Marler & Boudreau, 2017), firms in other countries still face institutional and cultural constraints that have a bearing on HR analytics implementation. By shaping to local workforce structure, regulatory frameworks and management beliefs, the paper approaches Human Resource Analytics as a technology and cultural innovation.

This review integrates over fifty studies into a conceptual model that links analytics maturity, data-driven culture, and talent outcomes. It is in line with different journals including JMR-SMET's regional HRM research, which focuses on culturally grounded HR practices in Thailand and Myanmar (Kyaw, 2025; Aung, Min, & Liana, 2025). Despite having a lower level of digital maturity, the results show that, if leadership and trust processes are established, businesses in South and Southeast Asia exhibit quick capability growth and noticeable performance gains. This study advances the objective of promoting transdisciplinary, regionally relevant management research by demonstrating Human Resource Analytics' uniqueness in both technology innovation and contextual flexibility.

This paper also serves as an idea for academia towards enabling the managerial level of organizations, decision-making process and in general provide new research direction that arises to understand and build a necessity upon data-driven culture and its beneficial effect in business ecosystem with integration of Data driven culture through HR analytics and Talent Management.

7. Research limitations

There are a few limitations of this study. A number of different variables may be tested empirically for their effects on the relationship between HR Analytics and Talent Management. The other limitation is the review has been analyzed with limited pertinent literature. There is also an available niche, since existing studies from other areas are not fully covered. For example: prescriptive modeling and organizational studies are limited in scope. Therefore, recent publications should be well-researched and tested so that recommendations of the model and roadmaps are validated for next research. Most significantly, this study has only developed a conceptual framework, but a thorough and quantitative research would greatly add value on variable integration testing.

8. Suggestions for future research

From this study, there are few suggestions that could be aimed to be suggested based on pertinent and recent literature reviews. One of them is: Quantitative methods may be employed to empirically verify the proposed model and tested in future research.

Future research could also focus on the impacts of analytics maturity, data-driven culture, and leadership commitment on talent outcomes, employing quantitative and mixed-method studies to experimentally assess the conceptual correlations proposed in this paper. By developing HR Analytics Maturity Models for companies in South and Southeast Asia (Marler & Boudreau, 2017; Budhwar et al., 2022), further studies could research more about how cultural and infrastructure factors affect adoption in a comparative way. Cross-country comparisons, particularly among Nepal, India, China and Malaysia, would help elucidate regional approaches to analytics-driven people management.

The results show how important it is for practitioners to use analytics in strategic workforce planning, promote a data-driven mindset, and make sure that data governance is ethical (Cooke et al., 2020). To improve HR analytics in emerging economies and make the workforce more sustainable and the organization more productive, it is vital to combine increasing skills, ethical governance, and adapting to the situation in further research.

9. References:

- Álvarez-Gutiérrez, F. J., López-Cabrera, R., & Aragón-Sánchez, A. (2022). Human resources analytics: A systematic review from the human resource development perspective. *Journal of Work and Organizational Psychology*, 38(3), 173–191. <https://doi.org/10.5093/jwop2022a18>
- Angrave, D., Charlwood, A., Kirkpatrick, I., Lawrence, M., & Stuart, M. (2016). HR and analytics: Why HR is set to fail the big data challenge. *Human Resource Management Journal*, 26(1), 1–11. <https://doi.org/10.1111/1748-8583.12090>
- Anthun, K., Håland, E. *et al.* What influences the use of HR analytics in Human Resource management in Norwegian municipal health care services?. *BMC Health Serv Res* 24, 1131 (2024). <https://doi.org/10.1186/s12913-024-11610-y>
- Aung, T., Min, Y. H., & Liana, S. R. (2025). Exploring the relationship between work-life balance and organizational commitment: Evidence from working professionals in Myanmar. *Journal of Multidisciplinary Research for SMET*, 1(1), 58–69. <https://doi.org/10.64297/jmrsmet.v1i1.4>
- Baeten, L., Dries, N., & Pepermans, R. (2015). The impact of HR analytics on talent management: A critical review. *Human Resource Management Review*, 25(1), 3–20.
- Bangura, Samuel. (2024). Effects of HR Analytics on HRM Practices: an integrative review. *Eurasian Journal of Business and Management*. 12. 114-122. 10.15604/ejbm.2024.12.02.003.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10), 1231–1241.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Boatman, J. (2024). The four levels of people analytics maturity: Descriptive, diagnostic, predictive, and prescriptive. *Deloitte Insights*. <https://www2.deloitte.com/us/en/insights/focus/human-capital-trends/people-analytics-maturity.html>

- Boudreau, J. W., & Ramstad, P. M. (2007). *Beyond HR: The new science of human capital*. Harvard Business School Press.
- Budhwar, P. S., Chowdhury, S., Wood, G., & Szamosi, L. T. (2022). Artificial intelligence—Challenges and opportunities for international HRM: A review and research agenda. *The International Journal of Human Resource Management*, 33(6), 1239–1267. <https://doi.org/10.1080/09585192.2022.2035161>
- Budhwar, P. S., Chowdhury, S., & Wood, G. (2023). Human resource management in the age of generative AI. *Human Resource Management Journal*, 33(4), 712–719. <https://doi.org/10.1111/1748-8583.12524>
- Cascio, W. F. (2016). HR analytics in talent management: A review and research agenda. *Human Resource Management Review*, 26(1), 1–16.
- Chambers, E. G., Foulon, M., Handfield-Jones, H., Hankin, S. M., & Michaels, E. G. (1998). The war for talent. *The McKinsey Quarterly*, 3, 44–57.
- Claus, L. (2013). Global talent management: An overview. In L. Claus (Ed.), *Global HR Practitioner Handbook* (Vol. 1, pp. 117–137). Global Immersion Press.
- Claus, L., Baker, S., & Ely, J. (2015). Global HR analytics: Making grounded talent management decisions for the global organization. In L. Claus (Ed.), *Global HR Practitioner Handbook* (Vol. 3, pp. 5–33). Global Immersion Press.
- Claus, L. (2019). HR disruption—Time already to reinvent talent management. *BRQ Business Research Quarterly*. <https://doi.org/10.1016/j.brq.2019.04.002>
- Cooke, F. L., Schuler, R., & Varma, A. (2020). Human resource management research and practice in Asia: Past, present and future. *Human Resource Management Review*, 30(4), 100778. <https://doi.org/10.1016/j.hrmr.2020.100778>
- Gambles, R., & Williams, E. A. (2012). The role of HR analytics in talent management. *Human Resource Management Review*, 22(4), 291–303.
- Giermindl, L.-M., Strich, F., Christ, O., Leicht-Deobald, U., Redzepi, A., & Weibel, A. (2022). The dark sides of people analytics: Reviewing the perils for organisations and employees. *European Journal of Information Systems*, 31(3), 410–435. <https://doi.org/10.1080/0960085X.2021.1927213>
- Hagel, J., Schwartz, J., & Bersin, J. (2017). Navigating the future of work: Can we point business, workers and social institutions in the same direction? *Deloitte Review*, 21. <https://dupress.deloitte.com/dup-us-en/deloitte-review/issue-21/navigating-new-forms-of-work.html>
- Jayaraman, S., Talib, P., & Khan, A. F. (2018). Integrated talent management scale: Construction and initial validation. *SAGE Open*, 8(3), 1–15. <https://doi.org/10.1177/2158244018780965>
- K., Jayalakshmi & Prabakaran, M.. (2024). The role of big data in transforming human resource analytics: A literature review. *The Scientific Temper*. 15. 321-329. 10.58414/SCIENTIFICTEMPER.2024.15.spl.38.

- Kiron, D., & Lebowitz, A. (2013). The future of HR analytics: A roadmap for the journey ahead. *Harvard Business Review*, 91(10), 118–127.
- Leicht-Deobald, U., Busch, T., Schank, C., Weibel, A., Schafheitle, S., Wildhaber, I., & Kasper, G. (2019). The challenges of algorithm-based HR decision-making for personal integrity. *Journal of Business Ethics*, 160(2), 377–392. <https://doi.org/10.1007/s10551-019-04204-w>
- McCartney S, Fu N (2022), "Bridging the gap: why, how and when HR analytics can impact organizational performance". *Management Decision*, Vol. 60 No. 13 pp. 25–47, Doi: <https://doi.org/10.1108/MD-12-2020-1581>
- Margherita, A. (2022). Human resources analytics: A systematization of research topics and directions for future research. *Technological Forecasting and Social Change*, 178, 121560. <https://doi.org/10.1016/j.techfore.2022.121560>
- Marler, J. H., & Boudreau, J. W. (2017). An evidence-based review of HR analytics. *The International Journal of Human Resource Management*, 28(1), 3–26. <https://doi.org/10.1080/09585192.2016.1244699>
- Mayo, A. (2018). Applying HR analytics to talent management. *Strategic HR Review*. <https://doi.org/10.1108/SHR-08-2018-0072>
- Michaels, E., Handfield-Jones, H., & Axelrod, B. (2001). *The war for talent*. Harvard Business Review Press.
- Meijerink, J., Boons, M., Keegan, A., & Marler, J. H. (2021). Algorithmic human resource management: Synthesizing developments and cross-disciplinary insights on digital HRM. *The International Journal of Human Resource Management*, 32(12), 2545–2562. <https://doi.org/10.1080/09585192.2021.1925326>
- Mondore, S., Douthitt, S., & Carson, M. (2011). Maximizing the impact and effectiveness of HR analytics to drive business outcomes. *People & Strategy*, 34(2), 20–27.
- Mohammed, A. Q. (2019). HR analytics: A modern tool in HR for predictive decision making. *Journal of Management*, 6(3), 51–63. <http://www.iaeme.com/jom/issues.asp?JType=JOM&VType=6&IType=3>
- Patil, Dr B S & Priya, M. R.. (2024). HR data analytics and evidence based practice as a strategic business partner. Vilakshan – XIMB Journal of Management. 17. 10.1108/XJM-07-2023-0148.
- Ramachandran, Rukma. (2023). Human resource analytics revisited: A systematic literature review of its adoption, global acceptance and implementation. *Benchmarking An International Journal*. 10.1108/BIJ-04-2022-0272.
- Rasmussen, T. H., & Ulrich, D. (2024). Moving people analytics from insight to impact. *Human Resource Development Review*. Advance online publication. <https://doi.org/10.1177/15344843231207220>
- Sammu, Josh & Joy, James. (2024). Predictive Analytics in Employee Retention and Engagement Strategies.
- Shafie, Mohammad & Khosravi, Hamed & Farhadpour, Sarah & Das, Srinjoy & Ahmed, Imtiaz. (2024). Cluster-based human resources analytics for predicting employee turnover using optimized Artificial Neural Networks and data augmentation. *Decision Analytics Journal*. 11. 100461. 10.1016/j.dajour.2024.100461.

- Sinisterra, L., Romero-Maestre, B., Herrera Madueño, J., & Larrán Jorge, M. (2024). A systematic review of the relationship between talent management, employee engagement and turnover intention. *Human Resource Development International*. <https://doi.org/10.1080/13678868.2024.2333036>
- Snell, S. A., & Bohlander, G. W. (2017). *Human resource management: An introduction to concepts and practices* (16th ed.). Cengage Learning.
- Thunnissen, M., Boselie, P., & Fruytier, B. (2013). A review of talent management: Infancy or adolescence? *The International Journal of Human Resource Management*, 24(9), 1744–1761.
- Vaiman, V., Scullion, H., & Collings, D. (2012). Talent management decision making. *Management Decision*, 50(5), 925–941.
- Vadithe, P., & Kesari, B. (2022). Human resource analytics on talent acquisition: A systematic review. *International Journal of Management Studies*, 9(4), 77–89.
- Vhora, Manisha & Bhandwalkar, Vidya & Rege, Prashant. (2024). AI-driven HR analytics: Enhancing decision-making in workforce planning. *The Scientific Temper*. 15. 3299-3308. 10.58414/SCIENTIFICTEMPER.2024.15.4.39.
- Wirges, F., Nold, H., Arlinghaus, K. R., & Lanza, G. (2022). Towards a process-oriented understanding of HR analytics. *Business Research*, 15, 1065–1103. <https://doi.org/10.1007/s40685-022-00183-2>
- Zebua, Delfi & Santosa, Tomi & Putra, Fegid. (2024). The Role of HR Analytics in Enhancing Organizational Performance: A Review Literature. *Indonesia Journal of Engineering and Education Technology (IJEET)*. 2. 363-368. 10.61991/ijeet.v2i2.69.