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The Effect of HR Analytics Competency Model on Managerial Decision Making and Business Results

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Abstract

The manner in which organisations utilise data has evolved to become more focused on satisfying the legal requirements of the employment. The evolving utilisation of data has progressively transformed the dynamics of the Human Resource Management (HRM) function, and organisations now demand HR professionals to conduct high-quality analyses. Multiple studies have indicated that the implementation of Human Resource Analytics (HRA) could aid HR practitioners in gaining a variety of perspectives regarding their contribution to the financial objectives of their organisations by facilitating the development of appropriate metrics. Regarding Indian organisations, however, the influence of HRA in enhancing business outcomes has been the subject of relatively few studies. The current investigation examines the impact of HRA competencies on business outcomes and organisational decision making. Opportunities and motivation encouraged employees to utilise their talents in the workplace, according to the analysis. It was discovered that providing competent employees with opportunities and motivation are critical factors in encouraging the development of their analytical abilities. Holding such analytical abilities significantly influences the decision-making processes of organisations and the overall outcomes of businesses.

Keywords: Human Resource Management, Human Resource Analytics, Decision-making, HR Analytics, Business Outcome.

Introduction

HR analytics are emerging in HRM. This raises the expectation that the HRA will solve many HR issues. These analytics will be used to turn massive amounts of difficult data into knowledge. The HRM decision-making process should assist executives make more data-driven, accurate decisions in the future rather than just summarising the past (Rasmussen and Ulrich, 2015). However, fundamental reporting, benchmarking, and scorecards have complicated HR analytics. With this technology, predictive analytics can be applied. Focus has shifted from documenting the past to improving future estimates. Soon, HRM decision-making measurement will be proactive rather than reactive.

Even while HR analytics have a lot of potential, there hasn't been much research on them, making it hard to know their true benefits. The Deloitte 2021 report indicated that only 8% of research organisations voted in favour of HR analytics' strong analytical capabilities, with one-third still developing the technology. Others haven't changed much in this area since prior years. These factors suggest that HR analytics' future potential has yet to be realised.

Human Resource Analytics in detail

Employee benefits like meals, snacks, pet insurance, baby cash, and annual trip incentives have grown in popularity.

This level of rewards and benefits is offered only to expand business cooperation beyond the "happy employee" campaign. Successful companies like Google, Facebook, and Apple use this talent management technique to analyse and evaluate data-driven decision-making. This human resource analytics method shows how data-driven decision-making improves business performance to prove its conclusions. Though defined differently, the human resource (HR) analytics strategy uses data-driven methods to help HR systems make decisions, create policies, and implement processes. Thus, HR analytics become a valuable tool for senior managers in a commercial setting where numbers matter. Thus, this growing trend and its strategic approaches assist managers evaluate HR systems, programmes, and actions. Senior company leaders can increase productivity and profitability by up to 6% by embracing big data and examining its effects on HR. HR processes reveal that monitoring staff management methods increases shareholder value. Because of their positive contributions to an organization's productivity, profit, income, and human resource gains.

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Based on actual facts, Mondore et al. (2011) suggested that HR analytics evaluate how its human resource data affects business growth. HR analytics synonyms include talent, workforce, strategic, and HR metrics. This study uses "HR analytics" to standardise understanding based on these evidence-based methodologies.

Data-driven analyses gather outcomes for most HR analytics functions. Thus, it measures HR initiatives' effects on executives and cross-departmental relationships (Chadwick et al., 2015). Due to the incorporation of several methodologies in HR analytics and data analytics, most current instances involve complex procedures that use descriptive, predictive, and prescriptive analytics in rising sequence.

HR analytics is a vast field that uses data to make good decisions and is growing with data science. Thus, HR analytics are engrained in all commercial organisations' mindsets. This century-old field has influenced economics, statistics, and mathematics. For years, industrial and organisational psychologists have used data to justify staff selection, training, and other organisational practices. However, HR analytics has been described as the creation of a new role in some organisations and the rebranding of an existing function in others. HR analytics—strategic approaches supported by feedback and integrated with HR operations—has garnered interest. Finally, HR-specific analytics encompass a wide range of data-analytic concepts and methods that incorporate business, legal, and ethical implications.

According to Pfeffer and Sutton (2006), evidence-based management is crucial to a company's performance and differs from traditional management practices. These scholars believe data-driven decisions are good.

The essential business disciplines of finance, marketing, supply chain management, and research and development have been extensively analysed, but few corporations have done worker data analysis. Enterprises must adjust to workplace changes. The HR department's adoption of data analytics will boost employer-employee productivity, which can be quantified.

Human resource analytics (HR Analytics) analyses employees and uses analytical methodologies to the organization's human capital to increase employee retention and performance. Thus, data analytics greatly affects HR management. HR analytics to boost employee performance will boost corporate success. Organisational success requires understanding these human drives.

Academic and human resources research, including its usefulness, has advanced. Some organisations unify human capital management, but not all can link HR to business productivity. This topic has been studied extensively (Paauwe, 2009). 65. Organisational development depends on human resources. It is crucial in modern business (Wickramasinghe and Fonseka, 2012). Technology innovation has revolutionised HR. Technology has made HR smarter and more dexterous. Any organisation or business needs success.

Organisational development is probably the best way to evaluate a company. Improving the workforce requires organisational skills, knowledge, and talents. All HR departments prioritise training competent and flexible employees to best serve their organisations and boost productivity. It would benefit the organisations and help them achieve their goals. With cutting-edge technology, analytics has transformed HRM. Numerous automated technologies have lowered workload and stressed HRM. Technological advancements have improved HR management. These cutting-edge solutions help huge organisations and MNCs manage effectively. Technology has increased and improved HR services, lowering corporate costs. Businesses that use HR technology well do better. Creative strategies improve corporate performance.

HR metrics, utility analysis, workforce economics, evidence-based management, HR scorecards, and HR return on investment had been used and debated by businesses for a long time without improving their bottom line (Rasmussen and Ulrich, 2015).

Business that leverages modern technology and automation may not have a longer-term competitive advantage. Technology enhances HR procedures, too. HR gathers operational data and creates reports, develops regulations, and improves employee and corporate productivity. Predictive and explanatory analytics matter. Modern organisations must enhance their institutional and human resource services, data availability for decision-making, and competitiveness.

HR analytics have several names. the use of HR analytics to report on selection, recruiting, internal and external remuneration, training and development, employee commitment, and sequential planning. HR measures the number of employees hired in the previous year, the number who participated in internal and external training programmes, the number who were promoted, the number who improved their educational credentials, the number who used the leave

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facility, and more. These measures or criteria can help firms assess their staff health and improve production quantity and quality. Depreciation rate becomes a criterion only when compared to current year or comparable companies.

In the age of analytics, we have lots of data. Good data analysis and interpretation are essential for the human resources department to use data accurately. Qualitative and quantitative data analysis are feasible. Advanced operations like IT, finance, and marketing may be replacing HR analytics. HR analytics will gain an edge as this dominance rules organisations (Rasmussen and Ulrich, 2015). Marketing, R&D, and finance fall behind HR in data analytics. If not handled effectively, analytics can hurt an organization's value.

HR analytics exclusively seeks business and employee growth. When the CEO ignores the company, senior managers must adjust and encourage HR analytics. The second crucial problem is who handles HR analytics—not IT or finance. HR analytics can empower them. Despite several HR analytics research, HR employees remain apprehensive about it due to its low understanding and ongoing negative effects. HR professionals must master these new skills to understand HR analytics (Rasmussen and Ulrich, 2015).

HR management frequently uses "HR analytics"—a newer term. The 2003–2004 HR Metrics and Analytics: Usage and Effect research proposed the idea. First human resource planning report. (2005) Levenson et al. separated HRA from HR measurements. These metrics form the basis for important HRM outcomes like proficiency, potency, and effect. However, Lawler et al. (2004) defined HR analytics as a demonstration of statistical methodologies and empirical programmes that may show the impact of HR initiatives, tools, methods, and empirical approaches.

HR measurements and analytics are distinct, although the literature is unclear. Although Bassi (2011) argues, HRA may be seen as consistently providing data on various HR measurements or more advanced solutions prompted by forecasting models and speculative scenarios. To assess employee perceptions of the profession, "evidence-driven programmes" were used. HR analytics also assist create an evidence-based programme that makes employee-beneficial decisions. It uses technology from prognostic modelling to HR indicator reporting.

Mondore et al. (2011) concluded that HRA showed that employees directly affect important company results, emphasising the link to strategic HRM. Any organisation may maximise workforce analytics benefits by using agile development and evidence-based management.

Rasmussen and Ulrich (2015) and Angrave et al. (2016) thought the HRA was a fad. Abrahamson and Eisenman (2008) argue that fads are unimportant and illogical since they do not affect HRM strategy or organisational business operations. This activity arises from bandwagon effects and pressures converging and diffusing. Without the desired results, inventions fail due to false expectations. Due to these similarities, HR definitions and labelling are important in this industry. First, distinguish HR analytics from HR metrics. An incredibly complete HR data analysis is included. Second, the HRA rarely evaluates HR functional data; instead, it integrates data from internal and external sources. The HRA concludes with information technology for data compilation and reporting. HRA strongly supports individual choices, the fourth feature. HR analytics connect businesses to HR strategic decision-making processes for results and performance. This third aspect of HRA is the most essential in strategic HRM literature because it creates and connects HR functions to strategic ones.

HR analytics seem to link HR procedures and choices to organisational performance better than HR measurements. integrating with business functions and being strategically influential. IT encourages HR analytics to use descriptive, predictive, and statistical studies to evaluate HR capital and organisational capital performance measures. Additionally, it encourages data-driven analysis of external economic benchmarks. HRA attributes are examined in an HRM innovation process.

Kossek (1987) describes an HRM innovation as a unique perspective on an HRM programme, policy, or practice that can be used to change workforce methods and behaviour. When giving HR analytics to a company for the first time, the user, who is also a new user, may assess business owners' HRM adoption speed. Second, HR innovations must produce plans to change employee attitudes and behaviours. The HRA is seen as a component of HRM practices to develop techniques for giving managers enough information, connecting that information to HRM procedures connected to employee attitudes and behaviours, and effecting organisational outcomes.

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Relationship between Analytics and Organisational Decision-Making

Acito and Khatri (2014) say data analytics boosts company productivity. Accounting, organisational or managerial networks like supply chains, and commercial divisions like health management and wellness programmes are affected. HRM is new to data analytics, however management recognises its value but questions their institutional readiness.

For instance, popular culture calls it people analytics, among other terms. These measures share many commonalities. They study human resources data, internal department data, and inside source data. IT departments collect, manipulate, interpret, and share organised and unorganised data. All analytics support people-related decisions in any company and are linked to HR decisions for better business outcomes and employee performance.

Several significant corporations employed analytics to better personnel selection and management in the 1940s (Lawler, 2015).With information technology, data collection, analysis, and interpretation are easier. It has enabled every company to use workforce analytics.

In addition, data from wearable technologies, email, and calendars makes it easier to understand employee behaviour and improve performance than in the past. Analytical and fact-based decision-making gives the organisation several opportunities to improve efficiency and effectiveness. Despite excitement and advertising, the company struggles to incorporate worker analytics. Several companies build workforce analytics teams and enforcements to try strategic intuitiveness and awareness from their personnel data, which often fails and delays other initiatives (Ramussen and Ulrich, 2015). According to Deloitte (2017), over 70% of employees believe that workforce analytics is a key factor to improve employee performance and boost the business, but only 8% of firms reported having any useful data, 9% believed that they knew the types of talents in their workforce that resulted in good performance, and 15% chose three talent indices or talent rosters for their managers.

Competency of HRA and COM factors

COM is the best model for showing how analytics affect business outcomes. However, organisational performance and HR analytics have a complex interaction at different levels of capability, potential, and supervisory support (Levenson, 2011).

Becker, Huselid, and Ulrich studied HR roles and organisational effectiveness in 2001. Several analytical elements were explored to see how they affect HR professionals' behaviour. The study found that HR professionals' competences were affected by communication of HR strategic performance outcomes to senior management, causal link estimation, effective assessment principles, and critical causal thought processes.

Kryscynski et al. (2018) examined HR performance and analytical skills. The relevant data came from 1117 HR specialists at 449 businesses. HR workers with greater analytical skills outscored those with weaker skills. As the link between analytic competence and HR performance varied by work position, the study found that job responsibilities and opportunity factors were important.

In order to boost employee engagement, Madhusudhan (2017) studied HR analytics. The research states that analytics enable HR professionals create a talent value model and determine retention rates. Analytical models that identify employee interests can also boost retention. According to the paper, such an analytical approach helps managers create customised performance incentives and decide when to announce raises and promotions. Organisations find work engagement or enthusiasm beneficial when formulating policies.

Minbaeva (2017) developed dependable HR analytics to provide her organisation a competitive edge. After drawing ideas from prior works, the author portrayed organisational analytics as human capital analytics. The author defined analytics as strategic aptitude, analytical prowess, and data quality. The person, process, and structural levels of these three analytic skills were examined. Analytics aspects were competent at individual, process, and structural levels. The individual level shows HR specialists' abilities, knowledge, and competencies. Job roles and organisational infrastructure are process-level organisational management competencies. Structure strengthens decision-making based on the best data and encourages research.

Schiesmann et al. (2018) conducted a case study to examine how labour force analytics affects HR professionals, employee happiness, and turnover. Talent analytics motivated employees, which affected satisfaction, the data showed.

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Methodology

After a thorough literature analysis, this study uses Capability Motivation and Opportunity (CMO) to evaluate hypotheses about the study variables' relationships. The data was collected quantitatively to integrate HRA competence components and analyse their impact on business outcomes. A structured questionnaire was distributed to 130 HR professionals, including HRA users and HR managers, from various Delhi/NCR organisations. Statistical approaches were used to determine HRA's impact on organisational decision-making and business outcomes.

Analysis

H1: The competency of the Human Resources Analytics (HRA) has a substantial influence on the decision-making process and overall business results of the organisation.

Table 1: Tests for HRA Competency on organisational decision making and Business Outcomes

Effect	Wilks' Lambda	F	df	Sig.	Partial Eta Squared
Understanding of data	0.914	10.511	2, 224	0.000	0.086
Analytical skills	0.988	1.407	2, 224	0.247	0.012
Interpretation skills	0.751	37.214	2, 224	0.000	0.249
Understanding of data *Analytical skills * Interpretation skills	0.932	8.230	2, 224	0.000	0.068

The Wilk's Lambda values for knowledge of data, analytical skills, and interpretive skills on business outcomes are 0.914, 0.988, and 0.751, respectively. This indicates that 91.4% of the variability in data understanding, 98.8% of the variability in analytical skills, and 75.1% of the variability in interpretation skills were not explained by differences across groups. Data comprehension had a substantial influence on both Return on Investment (ROI) ($F=13.984$, $p<0.05$) and the decision-making process ($F=20.941$, $p<0.05$). Interpretation abilities had a substantial influence on both return on investment ($F=33.461$, $p<0.05$) and the decision-making process ($F=67.852$, $p<0.05$). This suggests that the competencies related to Human Resources Analytics (HRA) have a substantial influence on the total utilisation of data and the ability to understand it effectively. Based on the aforementioned data, the hypothesis (H1) is confirmed, indicating that the HRA competency has a considerable influence on organisational decision-making and business outcomes.

H2: Organisational competency result is heavily influenced by HR competency.

Table 2: Tests for impact of HRA Competency on the Utilisation of data-based HRA Competencies by the Organization for Different Processes

HRA competency	Wilks' Lambda	F	df	Sig.	Partial Eta Squared
Understanding of data	0.766	34.304	2, 224	0.000	0.234
Analytical skills	0.827	23.497	2, 224	0.000	0.173

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Interpretation skills	0.653	59.502	2, 224	0.000	0.347
Understandingofdata* Analytical skills * Interpretation Skills	0.791	29.532	2, 224	0.000	0.209

Table 3: Test of between subject effects for Impact of HRA Competency on Utilisation of data-based HRA Competencies by the Organization for Different Processes

HRA competency	Utilisation of competencies outcome for different processes	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Understanding of	Process Performance	22.051	1	22.051	56.494	0.000	0.201
	Strategies	11.516	1	11.516	20.415	0.000	0.083
HRA competency	Utilisation of competencies outcome for different processes	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Analytical skills	Process Performance	12.171	1	12.171	31.181	0.000	0.122
	Strategies	26.515	1	26.515	47.004	0.000	0.173
Interpretation skills	Process Performance	37.644	1	37.644	96.442	0.000	0.300
	Strategies	18.958	1	18.958	33.609	0.000	0.130
Understanding of data * Analytical skills * Interpretation skills	Process Performance	21.504	1	21.504	55.092	0.000	0.197
	Strategies	15.332	1	15.332	27.230	0.000	0.108
R Squared = .528 (Adjusted R Squared = .520)							
R Squared = .390 (Adjusted R Squared = .379)							

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The Wilk's Lambda value for understanding of data, analytical skills and interpretation skills is 0.766, 0.827 and0.653, respectively. This implies that about 76.6% of the variations in understanding of data, 82.7% of analytical skills and 65.3% of the variation in the utilisation of competency outcomes by the organization for different processes is not accounted by the intergroup variations. Table above presents test between subject effects for impact of HRA competency on utilisation of data-based HRA competencies by the organization for different processes. Within HRA competencies, a significant impact was observed in the case of interaction between analytical skills and process performance (F =31.181, η_p^2 = 0.122), implying a low effect; analytical skills and strategies (F =47.004, η_p^2 =0.173) implying a medium effect and interpretation skills and process performance (F =37.644, η_p^2 = 0.30), implying a large effect. In addition another significant impact was observed between understanding of data and process performance (F=56.494, η_p^2 =0.201) implying a medium effect and understanding of data and strategies (F=20.415, η_p^2 =0.083) implying low effects.

H3: Capability, Opportunities and Motivation provided to HRA significantly influences the competency they possess

Table 4 : R-Squared

Construct	Coefficient of determination (R^2)	Adjusted R^2
Util	0.413	0.409
Exist	0.572	0.562
BO	0.289	0.281

The R^2 values shows that 41% variance in the Utilisation of HR analytics can be explained by HRA competencies (R^2=0.413). HR professionals who possess analytical qualifications and skills will also have the ability to utilise them effectively. Lack of such skills may hinder the utilisation of analytical competencies for generating value for both the organization and its stakeholders. The results also show that 57% variance in the HR analytical competencies can be explained by CMO (Capability, Motivation and Opportunity). Further, employees who have HRA capability when provided with adequate opportunities and motivation to utilise their skills, can perform their job well when compared to their employees. Therefore, the hypothesis has been accepted which means that Capability, Opportunities and Motivation provided to HRA significantly influences the competency they possess.

Moreover, it was observed that 28.9% variance in business outcomes could be explained by employees' HRA competencies and the utilisation of the same in their tasks. HR professionals who can understand, analyse and interpret the data at hand can utilise the same to make organisational decision making and implement strategies. The HR analytic competencies can be used by the employees to enhance the performance of various processes like recruitment, downsizing work force, organizational development, employee attitudes and competency analysis. The performance enhancement thus achieved can help the organizations to achieve returns on investments quickly.

Conclusion

The results indicated that enhancing motivation and providing opportunities to individuals with HR analytical skills can lead to improved business outcomes. The use of analytical skills to implement HR strategies and improve the effectiveness of HR processes, such as competency analysis and recruitment analysis, is crucial for achieving business outcomes. Research has revealed that providing motivation and opportunity to competent individuals plays a critical role in fostering the development of analytical skills. Having proficient analytical skills greatly influences business results. The study demonstrated the potential for enhancing business outcomes through the provision of motivation and opportunity to employees who possess HR analytical skills. The incentives and prospects offered to the employees foster their utilisation of their skills in their profession. The study revealed that the application of analytical skills in executing HR strategies and improving the performance of HR processes, such as competency analysis and recruitment analysis, significantly contributes to boosting organisational decision-making and business outcomes.

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