

HR ANALYTICS: AN INCLUSIVE MARKET OVERVIEW

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Abstract: *From growing resignations to a hybrid flexible working culture, the organisational leaders are piloting talent in flux. With an extensive implementation of analytics, the human resource division is witnessing an upsurge in growth across the industries. In the data-driven world, analytic solutions empower the guiding of, recruitment, management and talent decisions seamlessly. Analytics in human resources helps in analysing the relevant data to augment the strategies, organisational performances and decision-making processes. The advent of pioneering technologies, and collaborations, play a crucial role in the rise of human resource analytics. This chapter entails a brief market description of the different factors bolstering its growth over the forecast period, along with the trends catering to the changing work scenario. It contemplates the market share analysis of the analytic solutions across different industries. The article also discusses the market size and forecasts of HR analytics across the different regions for the projected period of 2021–2030.*

Keywords: *Analytics, Recruitment, Human Resources, Talent, Market Trends*

INTRODUCTION

Delving into the world of HR Analytics enables us to understand the role of data-driven decision-making processes in today's dynamic marketplace (Kumar, 2023). Despite relying on anecdotal intuition and evidence, analytics uncovers several factors to facilitate data-driven decisions (Pan, 2023). Understanding the shift is crucial for any industry to cope with the changing business scenario (Dixit, 2023). Technology leaders identified data and analytics in management as a transformational shift in organisations. Stepping up to newer technologies requires the HR segments to adopt key performance indicators and organisational principles of the main business functions (Blumenfeld, 2022). Advanced analytics can dramatically augment how organisations attract, source, develop and retain talent.

The human resource industry has revolutionised the way an organisation works, from an efficient hybrid work model to the metaverse, with varied value-added solutions. The emergence of digital technologies and changing workforce models, and strategies, play a pivotal role in addressing several external and internal challenges. With big data becoming a pervasive tool and a resource, the human resource segment is unprecedentedly evolving into a data-driven function (Šopov, 2022). A crucial aspect of effectual human capital management entails understanding and analysing the data, and incorporating the technologies to enhance the data-driven strategic decisions, processes and insights.

As companies across the world, are increasingly relying more and more on information, HR Analytics is significantly gaining traction in the workplace. The growth of HR analytics can be attributed to the advent of technologies such as data visualisation, machine learning and artificial intelligence tools. Incorporating analytics in human resources offers measured evidence of the way initiatives are paving the way to attain the strategies and goals of an organisation.

Hence, an efficient HR system enables business managers to make people-based decisions, instead of depending on gut feelings. The technology thereby, helps businesses minimise issues and maximise opportunities in the future.

Research Questions

Key benefits for analytics in the HR industry?

- What are the market estimates and forecasts for HR analytics in terms of revenue for the projected period 2021–2030?
 - What are the trends for HR analytics technology?
 - Which region dominated the market?
 - Which end-user segment accounted for the largest market share?
 - What are the competitive strategies and solutions offered by the market players?
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Purpose of the Article

This article demonstrates the projected market size with a global analysis of solution type, end-user segments and regional segments. It contemplates the different factors driving the market growth of HR analytics in different industries. The paper also focuses on the benefits offered by the implementation of analytics in the HR industry. Further, it discusses the key trends for the application of these technologies along with a brief description of competitive strategic solutions adopted by the players in the market.

Key Findings in the Research

Increasing efficacious use of human resources at minimal operational cost is expected to drive the HR analytics market growth. The changing business landscape, towards making data-driven conclusions for monitoring employee and organisational productivity is increasingly gaining traction. The unprecedented paradigm shift poses to be a vital aspect in maintaining long-term viability in an organisation. The study entails a market analysis, with an in-depth description of the market on a global scale and segment-wise in terms of revenue for the projected period of 2021–2030.

LITERATURE REVIEW

At the heart of recruiting, selecting, developing and retaining, is the Human Resources, a segment, which has witnessed exponential growth in every aspect over the years. The segment plays a crucial role in shaping the organisational culture, and attaining corporate success.

In the data-driven world, the HR strategies are significantly changing in terms of HR analytics, and HR metrics, are being largely used in the organisations for better decision-making. The shifting change helps organisations to become reliable in decision-making rather than being intuitive. HR analytics is an essential tool, helping to anticipate the return on investments, based on the current operational and strategic data, thereby assisting the organisations to turn into a profitable approach of tomorrow (Ekka, March 2021).

Evolution of HR Analytics

Advent of technological innovation (such as data visualisation, big data and cloud computing), data analysis techniques and data-driven decision-making process are expected to contribute favourably to the evolution of the HR analytics. Over the past few years, HR analytics has substantially evolved from a specialised topic to a vital

element of the contemporary HR operations. The evolution of analytics in human resources has led to an understanding of its significance in enhancing the satisfaction of the employees, and attaining the organisational goals.

Initially, one of the key focus areas of the human resource segment included strategic planning and organisational development. With the changing practices and processes, the HR departments started seeing the employees as a valuable resource, thereby largely, emphasising on the employee development and performance management. In the early 2000s, the talent management systems enabled the organisations to efficiently track and manage the development of the employees. In today's scenario, the advancements of technology, are paving way for the HR into a data-driven functions, with the ability to gain deeper insights into the employee's overall performance and development (Marr, 2023).

At the same time, digital innovations such as blockchain, artificial intelligence (AI), virtual reality (VR), people analytics and machine learning are also gaining traction to reconsider the human resource landscape. The concepts of machine learning and AI are expected to mechanise the mundane tasks, thereby enabling the HR teams to customise the learning and development programs, while, VR technology offers realistic immersive training scenarios, with the cutting-edge technologies such as blockchain augmenting the holistic data security.

Hence, these transitions have significantly widened the horizons of human resources, thereby cementing its importance in catering to the changing dynamics of modern workforce.

Benefits of HR Analytics

Embedding analytics in the human resources enables seamless correlation of the organisational goals, thereby proactively strategising for better working conditions. The concept illustrates the effectiveness and improvement required, with proposed solutions for the businesses.

Strategic use of analytics enables the HR systems to influence the business strategies and functions directly impacting the expenses, planning, risks and revenue.

A few benefits (Jay, n.d.) offered by the same can be illustrated as:

Managing Employee Productivity and Performance: With the incorporation of the Key Performance Indicators (KPI), and HR analytics, the return on investments of the employees can easily be assessed. An understanding of efficiency,

productivity and motivation helps the employees to enhance their performance levels, and significantly, contribute to the organisation's bottom line. Analytics in the workforce streamlines the employee workflow, thereby bolstering productivity, collaboration and performance.

Empowering Effective Workforce Planning: HR analytics allows organisations to remain ahead by preparing and projecting future employee demands. For instance, predicting attrition rates enables organisations to enhance their workforce development, particularly for the vital roles within the business. Effective analysis of the data thereby helps the organisations to gauge their workforce more precisely (Sinha, 2023).

Improving Recruitment Decisions: Tracking the data relevant to the recruitment metrics such as quality of the source, application completion rates, cost per hire, candidate experience and quality of hire helps gain valuable insights into the recruitment processes. Analytics in the HR segments helps professionals make better choices based on historical trends and data, and accordingly make data-driven decisions (Gomes, 2019). An effective HR analytics tool can enable HR professionals to easily determine the best candidates and hire them.

Practicing Evidence-based HR: Conventionally, HR management was based on temporary fixes, biases and trends, with inconsistencies. The evidence-based HR emphasises on making decisions backed up by evidence from research studies, real-life experience, findings, internal data, expert judgment, concerns and values, thereby enabling HR professionals to make HR decisions wholly on evidence and facts. Hence, evidence-based HR enables aligning the HR practices with the organisational goals, minimising errors, uncertainty and speculation in judgement, consistent and systematic decision-making causing actual interventions, enhancing the stature and credibility of the HR professionals, as well as ensuring robust risk management (Boatman, n.d.).

Build Benefit Packages and Equitable Compensation: Evaluation of the compensation data enables the pay disparities and fixes them to attain external and internal pay equity (Creelman, n.d.). It further determines the benefits being valued the most, by the employees, and accordingly adjusts the benefits and compensation packages.

Seamlessly Conducting Skill Gap Analysis: Identifying the skill gaps within the teams poses to be a vital part of the workforce. The analytics tools comprise of automation and data visualisation and use algorithms to identify the knowledge and skill gaps (Green, 2021).

Bolstering Reskilling, Upskilling and Learning & Development: Analytics enables professionals to understand where the employees need reskilling or upskilling and create applicable learning and development programmes to help bolster the performance, save money and time, reskill and upskill the employees and attain organisational goals.

Preventing Turnover: Incorporation of HR analytics helps understand the retention rate, departments having higher than average turnover, employees leaving the organisations and attrition rates for new hires. It further enables the organisations to minimise losses before their occurrence, minimise the turnover rate by understanding the main cause behind the same, and accordingly design the strategies to augment the retention rate.

HR Analytics hence, poses as a requisite tool to make unparalleled decisions in organisations, thereby enabling the professionals to help gain the benefits of the same.

Trends in HR Analytics

One of the significant trends in HR Analytics in 2023, is the growing use of Artificial Intelligence (AI)-powered analytics tools. Expanding the use of AI, backing up hybrid or flexible remote working, optimising investments in existing systems and creating internal talent marketplaces are witnessing an upsurge in the human resources segment. With the talent conditions varying industry-wise, few companies are emphasising on increasing the perks and compensation packages to attract and retain employees, while some of them continue to lay off their employees (Zielinski, 2023).

The cutting-edge technology enables HR professionals to gain insights from the increase in capacity for strategic decision-making and employee data, thereby posing to be significant for businesses of all types. The different trends in HR analytics can be illustrated as:

Diversity, Equity and Inclusion (DEI): The companies owe accountability to ensure the employees reflect the groups they aid and accordingly, build an inclusive and equitable environment to thrive (Vulpen, n.d.). For organisational professionals, the key focus on DEI, as a strategic economic advantage and as an organising principle of workforce culture is becoming significant. A diversified workforce helps increase the productivity of an organisation, with a positive environment.

Predictive Analytics: Building a targeted and well-calibrated pipeline, wherein, the conventional practices such as

delivery benchmarks and hiring practices are monitored, can be reformed by predictive analytics. It enables the HR professionals to identify their mistakes and evaluate the future paths. Predictive analytics in HR is expected to empower the periodic estimation of the quality of hiring in terms of leadership, output, productivity and cultural fit potential while gauging effectiveness in the organisation (Sharma, 2023).

AI-Powered Analytics in HR: With the use of AI, HR professionals can process large amounts of data more quickly and accurately, as well as identify the insights efficiently. Analytics powered by AI helps HR leaders make well-informed decisions at the right time (Gupta, 2023).

Sentiment Analysis: The conventional engagement-measuring tools such as feedback channels and employee surveys are often inadequate in understanding the employees' perceptions. With the incorporation of sentiment analysis technology powered by machine learning and natural language processing, huge amounts of feedback can easily be interpreted, thereby uncovering the organisational weaknesses and strengths and subsequently identifying the negative and positive feelings towards changes in workplace culture or management practices, or benefits or new policies. Hence, the concept enables professionals to make effective decisions, based on the review and feedback, thereby, boosting higher engagement and open communication between the employees (Maurer, 2019).

Growing Focus on Employee Engagement: Employee engagement plays a dominant role in attracting and retaining talent and, at the same time, remaining viable in the market. Analytics in the HR segment enables professionals to gain insights into the factors motivating the employees, and the factors impacting their engagement and disengagement. By emphasising on employee engagement, businesses can efficaciously enhance employee retention, thereby boosting the organisation's productivity. Hence, enhanced employee engagement processes help generate detailed analyses and reports for every business segment in the organisation, thereby empowering the leaders to substantially understand the current status of the workforce (HCMI, 2022).

Enhanced Data Visualisation: A large amount of data comprised of potential future outcomes, industry trends, key performance indicators (KPIs) and extremely valuable insights. Such information is expected to offer the HR segments with a means to propel better experiences with strategic recommendations for the organisation and its employees. However, collecting and analysing such information poses a challenge for any business, with data visualisation playing a vital role in such instances. With

the incorporation of data visualisation, the HR segments can seamlessly interact and engage with their data metrics reliably, thereby encouraging high-stake decision-making processes (Kilpatrick, 2021).

Key Players in the HR Analytics Market

Efficacious application of HR analytics necessitates adherence to best practices, such as bolstering cross-functional collaboration, prioritising data security and privacy, measuring success and ensuring data accuracy.

The market players in the HR Analytics market are engaged in adopting several strategies, to expand across the different regions of the world. The companies such as Crunchr, and Visier incorporating the concept of HR Analytics are illustrated as:

Crunchr

About the Company: Crunchr, founded in 2014, is headquartered in Amsterdam. The company helps organisations to gain insights into the working process of the same, by empowering the HR, leadership and people analysts, and, creates a better healthier working environment. Crunchr operates in nearly 60 countries and is trusted by leading organisations across the world, such as Randstad, Booking.com, Arcadis, metlife.com and others (Crunchr, Crunchr, 2014).

Solutions Offered: The company offers the most intuitive people analytics programme, which enables to:

- Revolutionise the people data into effortlessly accessible people insights.
- Attain faster time to value: adoption in 2 weeks to immediate access.
- Democratise the vision to make improved people decisions.

Crunchr is the provider of go-to, best-in-class, self-service people analytics solutions (Crunchr, Crunchr, 2014). This can further be illustrated as:

- *People Analytics:* The people analytic solutions by Crunchr are easy, fast and intuitive to use. The user-friendly platform enables HR, people managers and business leaders to cater to the big talent solutions in a few seconds. Key features offered by the solutions include drill down, decision support, data storytelling, integrated learning portal and others.

The people analytic solutions offer actionable and fact-based insights required to understand the happenings within an organisation. It helps to minimise the flight risk, guarantee equality and enhance succession.

- *HR Dashboards:* The drag-and-drop widgets help to create a completely personalised story within a few minutes. These solutions offer benefits such as easy-to-use and simple functions, visualisations and pre-built metrics, along with flexible and customisable functions. Key features offered by the HR dashboard solutions include drag-and-drop functionality, endless filter possibilities, data contextualisation, HR-relevant data in one place, insights across all the domains and secure sharing of the content.
- *Workforce Planning Tool:* The Workforce Planning tool helps build an effective and efficient workforce strategy. Key features offered by this tool include intuitive wizards, financial planning, demand, supply planning and business scenario building. This tool helps build strategies, design major workforce decisions and collaborate within the organisations on an integrated platform.

Visier

About the Company: Visier founded in 2010, is headquartered in Vancouver, British Columbia, Canada. In 2022, the company announced its first technology acquisition with Yva.ai, thereby adding workplace dynamics to the list of the company's solutions. The company operates with nearly 600 employees in approximately 7 locations across the world (Visier, 2010).

Solutions Offered: The company is engaged in offering solutions for people analytics, workforce apps and embedded solutions.

- *By outcome,* the solutions offered by the company include retaining top talent, target compensation strategies, supercharging talent acquisition, resolving employee burnout, propelling internal mobility driving revenue outcomes, unlocking people leaders, strategic recession planning, understanding hybrid impact and delivering on DEI.
- *By team and role,* the solutions offered by the company include CHROs, people analytic leaders, IT teams, finance teams and HRBPs.
- *By industry,* solutions offered by the company include life sciences, manufacturing, financial services, hospitality, healthcare and technology.

RESEARCH METHODOLOGY

Key research objectives of the study include:

- To identify the factors bolstering and hindering the market growth.
- To highlight the latest trends of the analytics in the HR industry.
- To illustrate the companies' incorporating analytics in the HR segments and the solutions offered by the same.

The article encompasses the market size and estimates of the global HR analytics market in terms of revenue over the forecast period (2021–2030); along with the application segments of the overall market. The estimates found via segmentation of the market help in determining the market size (in terms of revenue) and get insights related to the key business strategies, and the factors that are expected to bolster the market growth over the forecast period.

Identifying the players incorporating the analytic trends provides an idea about their offerings in the industry. The providers of analytic solutions in the HR divisions focus on efficient ways of development of the same, thereby catering to different market needs. The research methodology proposed in this paper involves a secondary study which is collected and gathered via various investor documents, statistics and company annual reports which are published by different market leaders. The below-mentioned factors help in analysing the data:

- Upcoming market trends and developments.
- Supply and demand estimates.
- Trends, drivers and restraints offering insights on product development, expansion as well as commercialisation across the different regions.

The analysis is carried out based on historical data. The data is segmented based on different parameters such as application or region-wise. Two types of methodologies are used to analyse the collected data:

Top-Down Approach: The data are collected on a global basis and are then divided into different entities (which include application/region).

Bottom-Up Approach: The data is collected, studied, and estimated on a regional basis and is then summed up to obtain the global numbers. The data is then forecasted over the forecast period of 2021–2030, based on different market trends and initiatives, thereby, gaining an overall understanding of the holistic information.

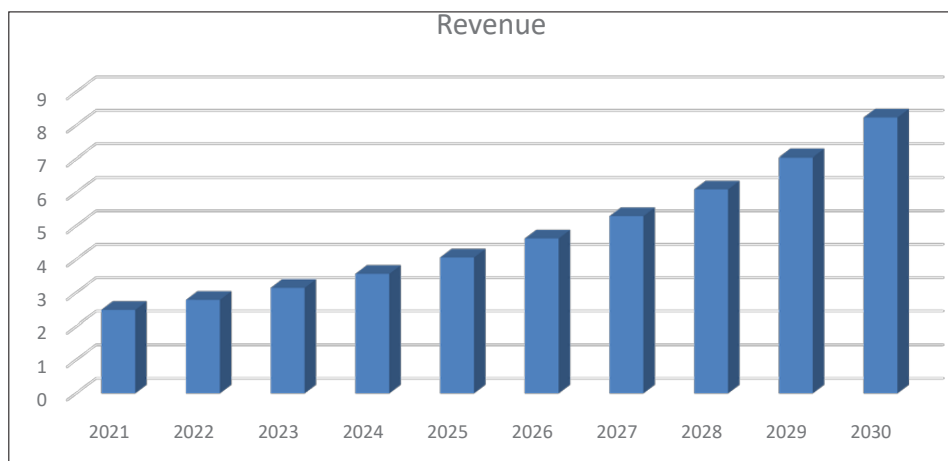
Analysis

Global Market Overview

Human resources, once restricted to administrative duties, has revolutionised into a tactical partner for the organisations, via data insights to propel talent acquisition and workforce management decisions. The increasing need to employ capable talent, and improve the retention of employees via innovative technologies, such as big data, cloud computing, business intelligence tools, real-time analytics, data integration, data visualisation and others is expected to favourably impact the HR analytics market growth over the forecast period.

The growth of HR analytics is significantly, an on-going process, developing from simple HR metrics to a pragmatic segment that leverages progressive analytical technologies and techniques. Key trends expected to shape the HR analytics market includes machine learning, AI, natural language processing, sentiment analysis, skill gap analysis and AI talent recruiting platform.

The HR analytics market was valued at \$2.49 billion in 2021 and is expected to witness a surge in its growth rate over the projected period. The market was expected to be valued at \$8.24 billion in 2030.



Source: Secondary research.

Exhibit 1: Global HR Analytics Market 2021-2030 (\$ billion)

The technologically advanced countries in the North American region, such as Canada and the U.S. are substantially financing digital solutions for effectual business operations. For example; in June 2022, Visier, announced a strategic partnership with SYMPLR. The partnership helped embed the people analytics proficiencies within the recruiting section, thereby creating a talent analytics feature, and substantially augmenting the overall experience of the employees.

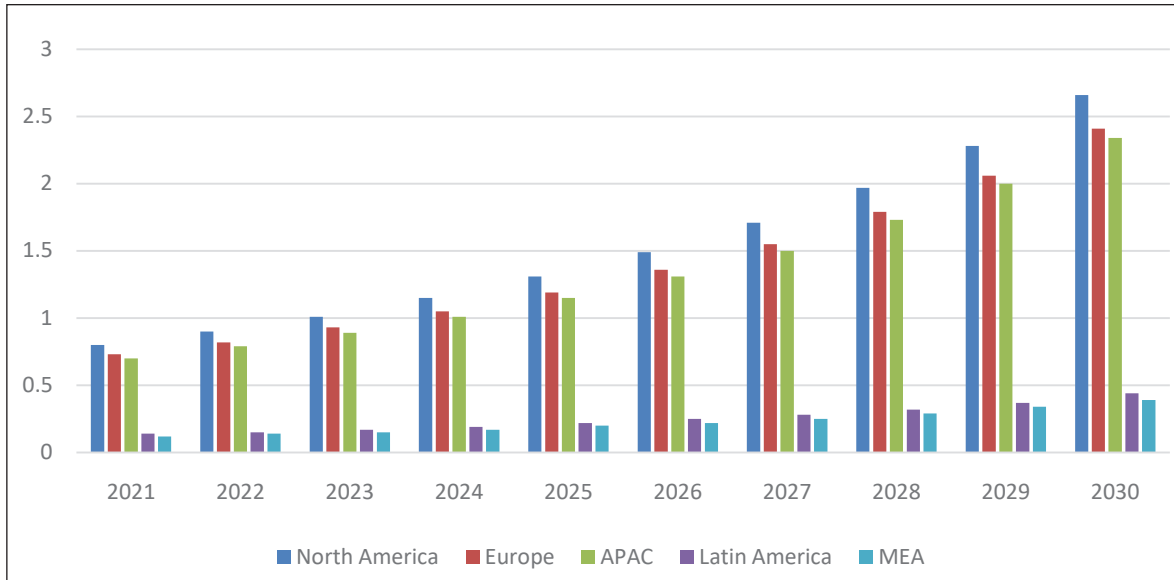
However, several factors are acting as a pitfall or restraint to the implementation of analytics in the HR division as well. These include the absence of standard benchmarks and HR metrics, which are anticipated to restrain the market growth over the forecasted period.

Segment Analysis

Application segmentation comprises of IT & telecom, BFSI, healthcare, retail, government, manufacturing, academia, and others. Segmentation based on regions includes North America, Europe, Asia Pacific, Middle East and Africa, and Latin America.

Based on Regional Segments

Asia Pacific is expected to grow at a CAGR of 28.15% over the forecast period. The increasing focus among businesses to bolster productivity, employee performance and organisational growth is expected to propel the demand for analytic solutions in the HR segments. In addition to this, the emergence of several technological innovations is also expected to contribute favourably to the market growth over the projected period.



Source: Secondary research.

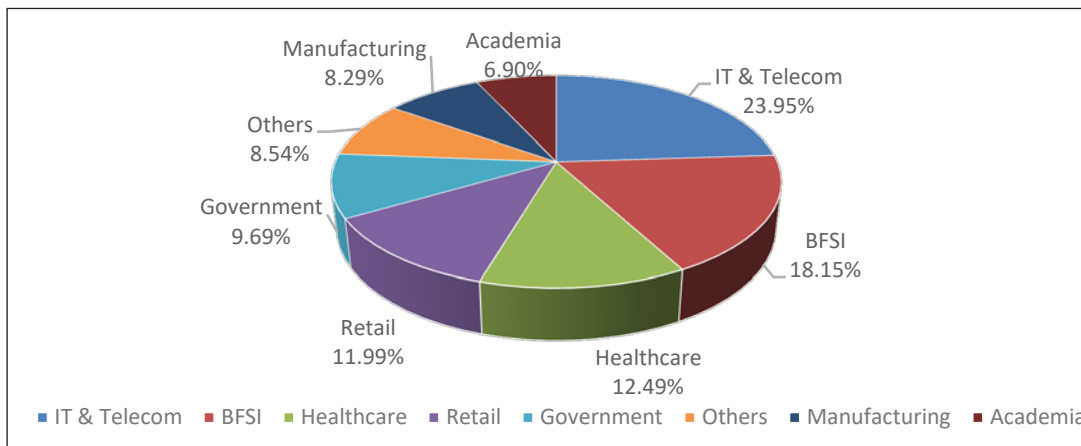
Exhibit 2: HR Analytics Market - By Regional Outlook, Market Size (In USD Billion)

Based on the Application Segment

Based on the application segment, the IT & telecom segment accounted for the largest market share in 2021. This can be attributed to the large workforce in the businesses across the different regions, along with the presence of the technical

infrastructure necessary to use the analytic solutions.

The healthcare segment is expected to witness significant growth owing to the increasing need to source and hire top talents, to enhance the employee experience and optimise the productivity of the workplace.



Source: Secondary research.

Exhibit 3: Global HR Analytics Market - By Application Outlook, Market Share (2021)

Factors Bolstering the Demand for HR Analytics Market

Organisations nowadays are emphasising towards technology-based services and solutions to cater to the changing talent acquisition requirements. Shifting towards advanced analytics requires capabilities focusing on a data-

driven approach, that requires extraction of data from the transactional systems, wherein, it is entered and re-coded into an accessible structure aligned to the subsequent organisational goals (Ledet, 2020). Incorporating state-of-the-art solutions in the organisations enables the players to facilitate the employee on-boarding process and augment the overall workforce efficiency.

Growing demand for efficacious workforce management and the integration of artificial intelligence in human resources is expected to significantly impact the HR analytics market across different regions of the world.

- **Increasing Effective Workforce Management:** Unlocking the potential with data-driven insights for strategic decisions and success is gaining significant traction in the human resource segment (Chaudhary, 2023). Businesses nowadays are witnessing an increase in an integrated workforce management system along with a unified and connected enterprise across varied locations. Efficacious data insights into turnover rates, hiring timelines, and candidate sources, are engaged in enhancing the retention and recruitment processes.

A few aspects of effective workforce management include (Hennigan, 2022):

- **Data Reporting and Analytics:** The workforce management metrics reveal the effectiveness and efficiency of proficiency, training and on-boarding processes, thereby illustrating the areas that require up gradation.
- **Payroll and Benefits:** Several workforce management software packages can create customised reports offering information relevant to payroll administration, fiscal year data and employee benefits.
- **Budgeting and Forecasting:** Usage of these metrics helps analyse the historic and current scenario in terms of valuable operation and business insights.
- **Scheduling and Time Management:** One of the significant aspects of workforce management includes tracking of employee hours. Including a scheduling system enables effective productivity, streamlined delegation and optimal time management processes.
- **Applicant Tracking and Recruitment Process:** An efficient management program helps organisations recruit the right employees at the right place at the right time.

Hence, an effective workforce management system in an organisation enables seamless functioning of operational processes with improved employee experience. Simplifying output with workforce optimisation software thereby streamlines the uninterrupted labour flow at minimal labour cost and enhances overall productivity.

- **Rising trends of Remote Working:** In the ever-evolving world, the paradigm of conventional workspaces is continuing to redefine the modern workplace (Haan, 2023). Organisations nowadays are significantly embracing remote working, to gain valuable insights and improved outcomes.

A new hybrid workforce with remote working is gaining traction, thereby enabling HR professionals to tap into the people analytics systems, to cater to the changing work environment (Penny, 2021). The advent of technology is expected to favourably impact the concept of work-from-anywhere with the inclusion of necessary tools for seamless collaboration and communication processes. VPNs and cloud-based applications enables the employees to access the organisation's resources securely and safely from the remotely located areas. Hence, growing trends of remote working in organisations impact the development of sophisticated association tools and innovative solutions enhancing productivity, and bolstering the demand for analytics over the forecasted period.

CONCLUSION

The application and concept of data analytics in management are gaining significant momentum, with HR professionals focusing on understanding the ways data can be revolutionised into insights leading to the up gradation of organisational performance (Chierici, 2019) (Ferraris, 2019) (Santoro, 2019) (Singh, 2019). Analytics in organisations are witnessing a shift from evaluating the levels related to a particular workforce attribute to understanding the influence of the workforce on the fulfilment of the firm's strategy (Huselid, 2018).

Organisations are increasingly investing in analytics at every stage of the hiring process and are expected to have access to an enduring record, using talent to boost the outcomes. The HR segments nowadays are increasingly improvising automation and talent intelligence to source, hire and reward employees. With this transformation come several benefits comprising improved GDP growth, organizational performance and productivity.

Hence, business leaders are emphasising on leveraging analytics as part of their operational advancement, talent management and workforce planning. Further, it helps businesses to use data and insights to identify and highlight the gaps, make a business case and have strategic recommendations for the organisation.

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