



HR Analytics In Business: Role, Opportunities, And Challenges Of Using It

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Abstract

Business organisations now have an easier time collecting, analysing, and assessing HR data thanks to HR analytics. Human resource analytics is a method that uses data mining and other quantitative methods to analyse and predict HR-related issues in organisations. Analytics geared toward the HR department can shed light on a company's internal issues, allowing for more informed decision-making. As a result, HR analytics integrates HR initiatives into the overarching business plan to strengthen the firm's position in the market. The HR analytics methodology has gone through various iterations of gauging the HR support functions. By allowing firms to better plan for future labour demands, HR analytics opens up new possibilities for success. Despite the company's success, integrating and using HR Analytics is challenging due to difficulties such as poor data governance, a lack of staff competency, and the lack of support from upper management. Many academics have spent years debating the merits of human resource analytics. Many of these studies have looked at HR analytics from every angle, from its conceptual roots through its present and future iterations, as well as its widespread adoption and subsequent rise in prominence inside businesses. Research into the pros and cons of applying HR analytics is conducted through the examination of multiple companies' experiences with the practise. Based on secondary data gathered from previously published research papers, journals from 2016-2019 made available by various research academics, blogs, and websites, this study lays forth the theoretical underpinning for HR analytics. The benefits and drawbacks of HR analytics will be analysed in this study.

Keywords: Human resources (HR), HR management (HRM), HR analytics (both predictive and descriptive), HR analytics for HRM (role and opportunities), HR analytics for HRM

(evolution), and HR challenges will all be used throughout the study.

Introduction

Human resource management focuses on measuring the efficiency with which workers and their superiors cooperate to achieve organisational objectives. Simply said, a company's people are its most valuable asset.

Due to the connection between HR initiatives and bottom-line outcomes, HR departments play a critical role in any company's success. However, whereas the efficiency of every other department in an organisation can usually be readily tracked, human resources is often overlooked since its performance is dependent on metrics and scorecards of data that cannot be simply quantified. Since the majority of HR-related information was qualitative, a rigorous quantitative analysis was impossible. As a result of technological advancements, human resources is currently advancing with an emphasis on determining the myriad ways in which particular individuals affect the business. The HR data sets of a firm grow in size, making it harder to collect and analyse the information.

There have been significant increases in both membership and revenue since the turn of the century, particularly in the service sector. As a direct result of their explosive expansion, industries have developed cutting-edge methods and machinery. As a result of widespread adoption of best practices and advancements in technology, business performance has improved to new heights and expansion has accelerated in recent years. In an effort to maintain an edge in the marketplace, several businesses have begun taking preventative measures. Human resource management (HRM) is becoming increasingly important to organisations, and as a result, innovative new methods and practices that encourage individuals to remain in their employ are being implemented rapidly. Every single worker is affected by this department, making it special. Human resource management (HRM) involves strategic planning for the use of all techniques, tactics, strategies, approaches, concepts, and standards for the behaviour of both employers and employees to meet the organization's goals in a competitive market. These companies understand the value of HRD and are actively searching for HR resources to implement. Since the vast majority of HR data is qualitative and hence inaccessible to quantitative analysis, this reliance on quantitative measurements and scorecards has led to inefficiency in HR. Human resources may still have a ways to go before it fully appreciates the value of its employees, but they are getting there. Because of advancements in HR analytics, qualitative data is now also amenable to quantification. Because of HR analytics, collecting, analysing, and evaluating data on workers is significantly less of a hassle. Because it delivers current and trustworthy information, human resource analytics can assist future decision-makers make more informed choices. It's a helpful tool for figuring out how to fix issues within a company. HR analytics can be used to better coordinate HR efforts with the overarching goals of the company.

Definition

Human resource analytics combines quantitative and qualitative data on employees and analyses it using statistical approaches to make better judgments in the future.

HR analytics is an experimental approach to human resource management that makes use of HR-metrics-based tools and techniques to provide credible and defensible results.

The field of human resource analytics examines the connection between issues in the workplace and employee output using statistical methods.

By quantitatively analysing HR data, procedures, and human resources, HR Analytics lets businesses shed gut instinct in favour of data-driven decision making. This tool could help management make better educated decisions and evaluate HR's contribution to the company's goals. The analytic capabilities of the HRIS have contributed to the expansion of human resource analytics.

Evolution

Globalization has resulted in the accumulation of massive amounts of data covering all aspects of a company's operations. In comparison to the rest of the company, Human Resources has been reluctant to implement analytics. It was necessary, however, to develop HR analytics due to the complexity of HR data collection and processing.

The "Resource-Based View Theory," first put forth by E.T. Rennese and articulated by Barney, has its origins in 1959. According to this hypothesis, businesses might gain an edge if their HRM practices are more in tune with their overarching business strategy. Later, academics criticised Barney's VRIO paradigm for putting an excessive amount of weight on human capital, despite the fact that this factor cannot generate competitive advantage on its own. [6]

Experts debated the development of HR metrics and scorecards in the 1970s, when they conducted extensive research into human resource management (HRM).

In their 1988 article, Baird and Meshoulam linked HR policy to an organization's life cycle and external issues. The importance of horizontal and vertical fit, as well as how HR works with other functions and HR sub functions to achieve organisational goals, were also discussed.

In the 1990s, companies realized they needed to treat their staff like an investment if they wanted to compete successfully.

Two instruments that have emerged in the first decade of the 2000s to assist firms calculate the monetary impacts of HR efforts are scorecards for both human resources (HR) and the workforce. Around the turn of the 2000, with the advent of HR accounting and utility analysis, HR practices were increasingly based on research and facts.

Oakland A. refined his metric interpretation in 2002; based on this work, Lewis established the "Money ball Concept" in 2003; and by 2006, the idea had spread widely. In 2009, GOOGLE made a concerted effort to build "Project Oxygen," which marked a significant departure from typical HR assessments in favour of HR analytics, by outlining the most critical

competent attributes required for an effective manager. Google also mentioned the potential monetary gains from putting money into HR analytics.

Despite its long history, the study of HR analytics is just beginning to mature. HR analytics have been the subject of a flurry of recent research, with most studies examining its use as a decision-making tool, the breadth of its application, or the general public's familiarity with the word. In order to help businesses make better decisions, HR analytics employs big data approaches to sift through mountains of HR information.

Types of Human Resource Analytics

This article describes Gartner's strategy for HR analytics in detail, section by section.

- **Descriptive:** HR data and its significance are discussed at length. It conducts its research into the past utilizing cutting-edge methods. Dashboards and key performance indicators make it possible to acquire a summary of the data without having to input in the figures by hand.
- **Diagnostic:** It explains why it's important to keep track of HR information. This article offers detailed advice on using descriptive statistics.
- **Predictive:** It answers the "What will?" question in HR data. Predictions are made using statistical models. This research clarifies why this pattern is likely to persist.
- **Prescriptive:** It helps with HR data analysis, allowing for more informed decisions to be made. Optimization and simulation methods are used.

“HR Analytics Report (AIHR)”

HR ANALYTICS REPORT (AIHR)		
1	Bright, 2016	81% of "developed analytical organizations report at least one HR analytics project with proven business impact"
2	Bright, 2016	65% of "developed analytical organizations have Business Partners and HR managers who can explain analytical outcomes and translate them into clear actions, versus 35% of starting analytical organizations"
3	Bright, 2016	"87% of front runners report analytics to be part of the HR roles description"
4	Bright, 2016	Almost half of starting organizations indicate they have no analytical professionals with statistical knowledge
5	NTM, 2016	"87% of front runners report high data quality"

6	NTM, 2016	31% of organizations report poor data quality as the biggest data challenge to conduct analytics
7	NTM, 2016	77% of organizations report dispersed data across multiple HR systems as their main challenge to analytics
8	Bright, 2016	HR analytical maturity goes hand in hand with HR reporting maturity
9	Rosslyn, 2017	Only 20% report a lack of skills to analyze data as their biggest challenge for conducting people analytics. 60% report data problem as their biggest challenge
10	Bersin, 2017	69% of companies are integrating data to build a People Analytics database

Literature Review

- You can get back around \$13.01 for every dollar you put into analytics.
- In paper “A Study on the Acceptance of HR Analytics in Organisations by Lije George and T. J. Kamalanabhan” 2016 states that The global business analytics software market is currently valued at \$40 million, expanding at a CAGR of 6.5%.
- “Workforce Analytics Market Analysis By Type (Solution, Services)” By Services (Managed, Consulting, System Integration), By Deployment, By Organization, By Application, By Region, And Segment Forecasts, 2018 – 2025 “Published Date: Jun 2017 - Base Year for Estimate: 2016 - Report ID: GVR-1-68038-947-0 - Format: Electronic (PDF) - Historical Data: 2014 – 2015 valued the global workforce analytics market size at USD 430.9 million in 2015.”
- “Global HR analytics market to grow by 12% by Anushree Sharma on People Matters states” Outlook on the World HR Analytics Industry, 2019-2025 projects a CAGR of about 12% for the HR analytics market between 2019 and 2025.
- Markets & Markets estimates that the HR analytics market will grow from \$1.9 billion in 2019 to \$3.6 billion in 2024, a CAGR of 13.7% Human Resource Analytics Market Component, Application Area in Workforce Management, Recruitment, and Employee Development, Organization Size, Deployment Type, Vertical (Industry like Banking, Financial Services And Insurance, Manufacturing, and IT and Telecom), showing Region to Global Forecast from 2019-2024. Published Date: Jun 2019 | Report Code: TC 7162 states
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“Research Methodology”

components of our work that are conceptual and descriptive.

Source of Data: information gathered from secondary sources such as newspapers and television rather than primary ones like interviews and questionnaires. Secondary sources have been assembled to provide insights into the domestic and international contexts for the

years 2016-2019. Data analysis sheds light on HR analytics' current function, future potential and existing obstacles.

Objectives

- Analytical promise in human resources.
- The purpose is to understand the potential downsides and upsides of HR analytics.

“Analysis”

➤ “Role of Human Resource Analytics in Human Resources”

Having access to HR analytics is crucial. If the HR department adopts an analytical mindset, it may grow more rapidly and make more informed decisions. Human resource analytics is helpful to businesses because it compiles and analyses information to reveal both positive and negative trends. The method makes it simple to compare an organization's results against those of its rivals. Human resource analytics can be used for a wide variety of purposes, including workforce planning, gaining a competitive edge, retaining key employees, using data to inform decisions, creating insights and models for the organisation, facilitating performance management, manipulating data, and selecting the most appropriate modelling methodologies. The following are some of the most notable applications of HR analytics:

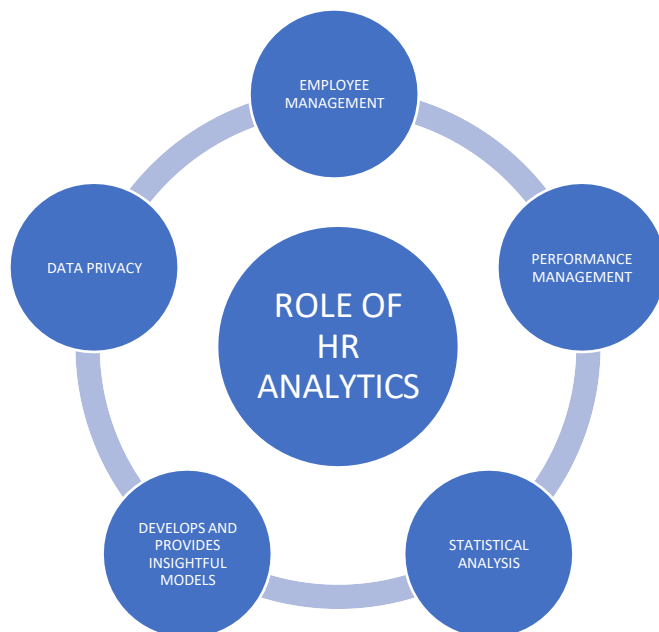


Fig 1: Role of Human Resource Analytics

1. **“Employee Management”**: Analytics for managing human resources are an essential

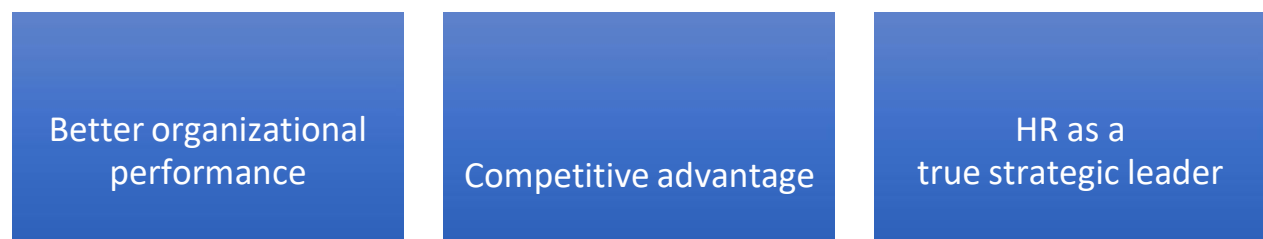
tool in modern business. The applicant's background, academic credentials, and professional experience are all detailed here. Features measures for evaluating CVs and other data HR professionals can use during the hiring process. To determine what factors contribute to employee turnover, HR analytics seeks to understand why these numbers fluctuate over time. Information regarding employment, employees' contentment with those positions, employees' engagement with their work, employees' lengths of service, and anything else that might be important are all stored in a central database.

2. **Performance Management:** Because it may identify both high- and low-performing indicators, human resource analytics is useful for crafting a plan to analyse employee performance. Analyzing information about human resources can reveal not only how well a business is doing at the moment, but also what changes need to be made to production in the future to secure expansion. We explain the what and the how of employee performance in great detail.
3. **Statistical Analysis:** Research is the ultimate goal of data collection in the field of human resources analytics. Human resource analytics' statistical analysis allows for the smooth integration of data and the provision of input-output studies in the areas of people, cost-benefit, and social-networking analyses. Use it as a gauge of how happy and productive your staff is. This not only facilitates communication and collaboration, but is crucial to the development and implementation of projects. Risks like employee turnover can be evaluated with the help of human resources data analysis.
4. **“Develop and Provides Insightful Models”:** An HR analytics system will employ statistical methods to better leverage data and demonstrate its influence on the organisation. Making these models enables the visualization of understandings regarding performance gaps, variables increasing or lowering productivity, etc.
5. **Data Privacy:** The confidentiality of secret information is crucial to the security of any business. Human resources analytics are used to store and secure vast amounts of data. When HR analytics are implemented, data is protected against abuse and exploitation.

➤ **“Opportunities and Challenges of Using Human Resource Analytics in Business**

Opportunities”

Potentials have a usefully broad scope of applicability. The "opportunity" of HR analytics refers to the possible gains that could be made by implementing the analytics. There are



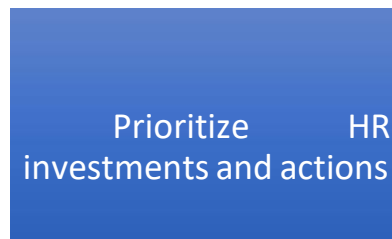
many benefits that a company can reap from using or implementing HR analytics. Among the many potential applications of HR analytics are the following:



Fig 2: Opportunities of Using Human Resource Analytics

Opportunities for Using HR Analytics in Business:

1. **Better Organizational Performance:** Human resource analytics has the potential to increase knowledge about staff members, which in turn could boost morale and output. Consequently, this adds to higher production throughout the company.



2. **“Competitive Advantage”:** Human resources managers and professionals may be able to benefit from HR analytics by basing their judgments on more solid evidence. It is an effective management tool since it helps employees understand and support the company's overall mission. By keeping more thorough and precise records of employee time, money, and other operational indicators, HR analytics gives firms an edge by allowing them to make more educated strategic decisions.
3. **HR as a True Strategic Leader:** Sharing the good news about the company's wise decisions is simplified with the aid of HR analytics. This moves the focus from forecasting to decision making that takes into account both immediate and long-term factors. Human resources may be more proactive and strategic if they have access to this data.
4. **Find the Reason for Attrition:** Human resources are responsible for things like strategic planning, staffing, training, and keeping employees. It is in the best interest of the firm to provide a safe and pleasant workplace for its workers, as their productivity is directly proportional to their satisfaction at work. Human resource analytics can help businesses learn what factors lead to employee turnover. If a company realizes how important it is to keep hold of its best workers, it will make more efforts to do so.
5. **Prioritize HR Investments and Actions:** The HR department's power to shape and enhance businesses has increased as a result of the rapid transition from the old to the new tactical and strategic system, to which HR analytics has contributed significantly. As a result, the HR team's gaps in service have been closed. Due to a lack

of appropriate analytics methodologies, HR has trailed behind other divisions in the past. Therefore, HR may now leverage HR analytics to prioritise resources and activities.

Challenges

It's been said, and rightfully so, that there are pros and cons to everything in the universe. There are pros and cons to everything in our society, from other people to new technologies. This is especially true when considering the impact that various innovations might have on various types of enterprises. The difference between an opportunity and a challenge lies in the fact that the former is a place where achievement is possible while the latter is an



obstacle to it. When companies and their employees try to implement or use HR analytics, friction often arises.

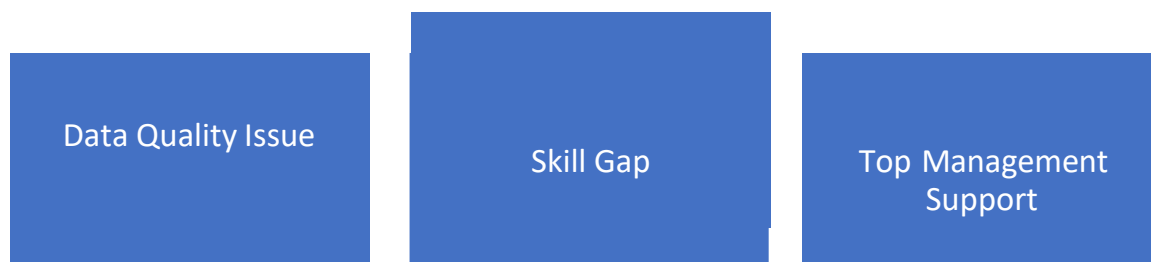


Fig 3: Challenges of using Human resource analytics

“Challenges of Using HR Analytics in Business”:

1. **Data Quality Issue:** Problems with data quality arise in HR analytics because of the challenges that businesses have when trying to collect, process, and retain massive volumes of information. If workers' input is imprecise or incomplete, the resulting data may be missing or incorrect. Inevitably, some data will be lost or distorted in transit, and in some cases, identical information will be made available. There may be unreliable outcomes from HR analytics tools if there are problems with the quality of the data that is already available.
2. **Data Governance:** Organizational data governance issues have arisen in the context of using HR analytics tools. Information lawfulness and morality are both determined by data governance. In order to comply with this law, the corporation must follow a rigid code of conduct when handling client information. Innovative HR analytics solutions can be risky for an organization's data governance because they collect and

analyse large amounts of data for data-driven decision making.

3. **Top Management Support:** The use of HR analytics often lacks backing from higher-ups. Due to upper management's intransigence, it has been challenging for enterprises to secure funding for the acquisition of employee data gathering and analysis technologies. The C-suite will consider effective HR analytics as an investment and will expect a bigger return on their money.
4. **Skill Gap:** Ability to conduct quantitative analysis, knowledge of psychometrics, familiarity with relevant legislation, and the capacity to analyse, grasp, and convey the business and business environment are just a few of the many skills necessary for effective use of HR analytics. Only individuals who have extensive experience in human resource analytics and the capacity to provide practical analytic results from contextual insights should conduct HR analytics. Therefore, HR analytics may prove to be detrimental to the company.

Conclusion

Human resource analytics, which aim to boost productivity inside an organisation, are a relatively recent development, made possible by the widespread availability of computers and other technological advancements in the business sector. Human resource analytics makes use of quantitative data gleaned through statistical models and procedures to aid in making decisions based on concrete evidence. For better understanding, human resource analytics compile and analyse all relevant data pertaining to HR. This paper highlights a number of obstacles that contribute to the difficulties in deploying HR analytics in organisations, including a shortage of skilled HR personnel, poor data quality, and a lack of data governance. Companies may lose the backing of their higher-ups if they continue to have problems like these. HR analytics, in spite of these obstacles, has helped firms acquire a competitive edge, resolve HR-related difficulties, boost organisational performance, and strengthen HR's primary role. New strategies can help close the knowledge and ability gap to some extent. If the company follows all applicable laws and standards, it will be able to use and store the relevant data in question without breaking any of them. The study shows that there are pros and cons to integrating HR analytics, but the potential benefits may outweigh the expenditures. In order to increase the likelihood of HR analytics implementation, organisations need to be convinced of the benefits. Human resources will be undergoing shifts to place more weight on data and less on gut instinct. With proper application (in terms of both timing and industry), HR analytics may be a powerful tool for any growing business.

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