HR analytics in Business: Role, Opportunities, and Challenges of Using It.

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ABSTRACT

With the emergence of HR Analytics in organizations; gathering, interpreting, and measuring of HR data has become easy. HR Analytics act as a tool which is a combination of statistical techniques that enable collection, interpretation, measurement, and forecasting of data. HR analytics enlightens solution to the organizational problems and make accurate decisions. HR analytics hence aligns HR strategy with overall business strategy to obtain a competitive advantage. HR analytics has passed through phases of measuring the Sub HR functions.

HR Analytics provides various opportunities to business as it forecasts workforce requirements, enables HR to achieve corporate goals, and improve organizational performance which helps businesses in finding success. Despite the success, the business faces some big challenges like data governance, skill gap among employees, top management support, and many other such challenges in implementing and using the HR Analytics tool in business.

Various research scholars have discussed HR analytics from so many years. So many papers have come focusing on the conceptual part of HR analytics, past present and future scenario of HR analytics, acceptance of HR analytics in organizations, the extent of its utility, rise of HR analytics, and various other related studies. This paper aims to find out the challenges and opportunities faced by the business firm in implementing HR analytics as a tool in organizations. This study also gives the theoretical concept of HR analytics based on secondary data collected from previous research papers, journal of the year 2016-2019 given by various research scholars, blogs, and websites that provide HR analytics recent data. The study will provide the pros and cons of implementing and using HR analytics.

Keywords: Human resources, Human resource management, human resource analytics, predictive, descriptive, evolution, role, opportunities and challenges.

INTRODUCTION

Human resource management is aligned towards investing all the tools & techniques, practices & strategies and approaches & measures to understand the performance of employers and employees who work together to achieve organizational goals. Humans are important resources for any organization.

Human resources act as a very important aspect as the human resource department results in prosperous organizational performances through forming a connection between HR actions and business results. Every function of any organization plays an important role as their results can be analyzed easily, only the human resource function of any organization was lacking behind due to its dependency on metrics and scorecards of data which can be quantified. Most of the data could not be quantified due to its qualitative nature in human resource function. But now human resources are forwarding itself towards understanding how people are affecting the organization with improvement in technologies. As organizations have large amounts of HR data it becomes difficult to collect and analyze it.

During the last few years, the organization has shown huge growth especially in the era of the 21st century that too in-service sector. There has been development of new advanced practices and technologies in industries as

they are growing very fast. The development and new practices have shown improvement in the working of organizations and these organizations are showing growth effectively and efficiently. Organization are working to improve competitive advantages. Businesses are showing tremendous adoption of such technologies and practices which can help in retaining utilizing the HRD as human resource management plays a very important role in any organization. It is the only function of an organization that plays an important part in its people. HRM prospects all the tools, practices, approaches, principles, and forms guidelines for the employer and employee's behavior so that they can come and work together to achieve competitive organizational goals. With an understanding of how important HRD is for any organization, these organizations are working towards the adoption of such technologies which can enhance their working. Only HR Function was lacking behind due to its dependency on metrics and scorecards of data which can be quantified, most of the HR data could not be quantified due to its qualitative nature, and analysis of HR data was mostly dependent on instincts. But now HR is forwarding itself towards understanding how people are affecting the organization. There has been an evolution of HR analytics in the organization to quantify the qualitative data too. HR analytics helps in gathering, interpreting, and measuring of HR data. HR analytics provides up-to-date and accurate data along with providing better future decisions. It helps in providing a solution to organizational problems. HR analytics aligns HR strategy overall business strategy.

DEFINITION

HR analytics is a methodology that uses statistical tools and techniques to unify and evaluate employees quantitative and qualitative data that helps in bringing out meaningful insights to develop better future decision making.

HR analytics is an experimental approach that uses software and method based on HR metrics to provide reliable and justifiable human capital results impact effectively and efficiently.

HR analytics is a data-driven framework that understands and evaluates the relationship between workforce problems and employee's performance by driving new insights through existing insights.
HR Analytics is HRM innovation enabled by companies to analyses HR data, processes, human capital statically for making data-driven decision making and ignoring the process of gut feeling. This tool helps in making better decisions and testing the effectiveness of the HR department towards business goals. HRIS has provided a way to HR analytics to grow and develop as it includes some limited analytics solutions within its system.

EVOLUTION

As organizations were raising globally, they have a large amount of data in each function. The Organization uses analytics in all of its functions but HR was lacking behind, so due to difficulty in collecting and analyzing HR data it becomes a necessity for the evolution of HR analytics.
In 1959 E.T. Rennese explained a theory given by Barney namely "Resource-Based View Theory". This theory explained that to achieve a competitive advantage in an organization there is a need to understand the relationship between HRM and Business strategy. Barney also stated VRIO i.e., Valuable, Rare, Inimitable, and Organized framework which was later criticized by scholars as this theory included only human capital and accordingly human capital cannot create any competitive advantage. [6]
In the 1970s HRM-related issues were analyzed and how to use HR metrics and scorecards to measure HR data were discussed.
In 1988 Baird and Meshoulam explained the relationship between three important aspects of any organization i.e., HR policies, organization life cycle, and business challenges within the organization. They also explained vertical and horizontal fit which explains how collaborations of the HR function with other functions and HR sub-functions helps in achieving organizational objectives.
In the 1990s organizations found that to achieve objectives and goals of any organization to create a competitive advantage it is important to value employees and they started viewing their employees as material resources.
During the first half of the 2000s, various new tools and techniques were introduced to measure the impact of HR activities and practices on organizational performances such as HR scorecards or workforce scorecards. Later in mid of 2000, there was the exposure of HR accounting and utility analysis which later showed a shift towards the development of a more scientific and evidence-based approach to HR.
In 2002 Oakland A found more advanced perceptive use of metrics and based on this experiment Lewis in 2003 found a concept called "Moneyball Concept" which showed growth on a large scale in 2006. In 2009 GOOGLE worked on finding out the best competent traits that are needed to be an effective manager and doing this Google developed "Project Oxygen" which bought a tremendous shift from traditional HR measurements to HR analytics. Google also highlighted the benefits of using HR analytics in organizational performances.

Since then HR analytics has received a certain amount of attention but still, it has not reached its final stage. Researchers on HR analytics recently have been started which mainly focuses on the use of Hr analytics, it as a decision support tool, the capability of this tool, or awareness of HR analytics. HR analytics is developed after the development of big data and now it uses a large amount of HR data to provide the organization with decision making.

TYPES OF HUMAN RESOURCE ANALYTICS

Gartner's model has described various kinds of depth levels HR analytics includes which are discussed below:

- Descriptive: it explains "What" of HR data. It interprets the historical data to analyses results. It includes key performance indicators and dashboards to explain the data.
- Diagnostic: it explains the "Why" of HR data. It gives a deeper analysis of descriptive data.
- Predictive: it explains "What will" of HR data. It uses statistical modeling to predict results. It explains the trend that would occur in the future.
- Prescriptive: it guides to understand the HR data and provide evidence-based results. It uses simulation and optimization techniques.

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

- **Nucleus Research, 2014** states Analytics pays back $13.01 for every dollar spent.
- In paper **A Study on the Acceptance of HR Analytics in Organisations by Lije George and T. J. Kamalanabhan**, **2016 states that** the popularity of business analytics can also be seen in the growth of the business analytics software market which was valued as $40 million worldwide with a growth rate 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** the report Outlook on the World HR Analytics Market, 2019-2025 estimates around 12 percent growth at CAGR in the global HR analytics market by 2019-2025.

- Markets and Markets estimates growth from USD 1.9 billion in 2019 to USD 3.6 billion by 2024 at CAGR of 13.7% in the global HR analytics market size as stated in **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

RESEARCH METHODOLOGY

This study is conceptual and descriptive nature.

Source of Data: Secondary data- through journals, magazines, periodicals, books, websites, and organization records. Secondary data belongs to the year 2016-2019 of both national and global levels.

The data is analyzed thoroughly to understand and identify the role, opportunities, and challenges of HR analytics in the current scenario.

OBJECTIVES:

- To identify the role of analytics in human resource function.
- To Find out the threat and opportunities of implementing and using human resource analytics

ANALYSIS

➤ **ROLE OF HUMAN RESOURCE ANALYTICS IN HUMAN RESOURCES**

HR analytics plays a significant role in human resources. Using analytical techniques HR functions can grow at a faster pace and can have evidence-based decision making. HR analytics gathers, assess previous information which provides organizations with positive and negative trends. It evaluates the organizational performances against its competitors easily. HR analytics plays a major role in workforce planning, competitive advantage, employee acquisition to employee retention, leveraging data, developing insights and models for organization, helps in performance management, data manipulation, selecting suitable modeling techniques, and others.

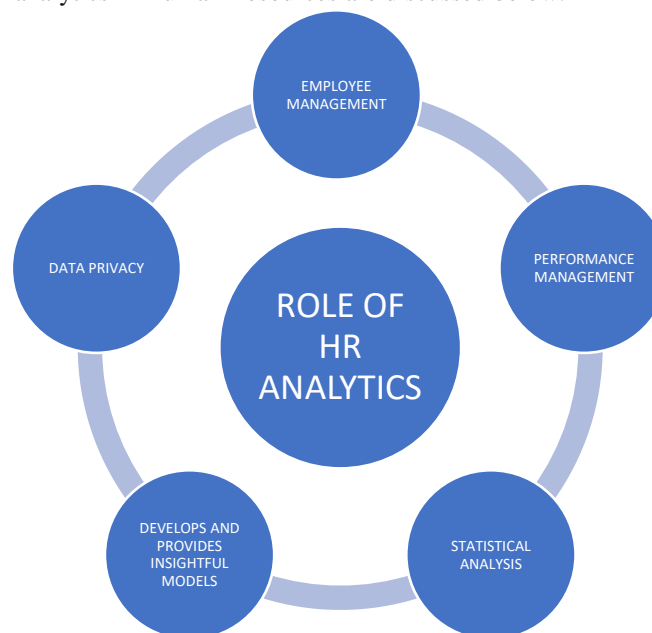Some of the key roles of analytics in Human Resources are discussed below:

Fig 1: Role of Human Resource Analytics

1. **Employee Management:** Human resource analytics plays an important role in managing employees of the business. This stool stores relevant data of employees profiles including experiences, skillset, knowledge etc. It includes data that help the HR department in the hiring process as it analyses resumes and other relevant details using various metrics. HR analytics evaluates the reason for the increase or decrease in attrition rates of organizations. This keeps records of employee or job satisfaction, job involvement, years in the role, and every other relevant information about the employee.

2. **Performance Management**: HR analytics helps in building a road map to evaluate the performance of employees as it can provide high and low-performance indicators. HR analytics provides current

performance, and improvements required in their performance for development. This provides what and how of employees performance.

3. **Statistical Analysis**: The information collected through the use of HR analytics is collected to analyze data. Hr analytic help in data integration and provide input-output analyses related to employees, cost-benefit, social-networking analysis can be evaluated through using statistical analysis of hr analytics. This tool also helps in providing satisfaction, performance of employee's evaluation. This plays a significant role in project planning and utilization and also provides communication and interaction schemes. For example: risk level attrition can be evaluated through HR analytics.

4. **Develop and Provides Insightful Models**: HR analytics tool uses statistical measures that help in leveraging data to show an impact on the organization. This creates models that provide visual insights to identify the performance gaps, factors boosting or decreasing productivity etc.

5. **Data Privacy**: Privacy of any data is of utmost importance for any organization to protect itself from threats. HR analytics maintains and stores a huge amount of data with security. Data can not be manipulated and unauthorized use of data is not possible if an organization uses HR analytics

➤ **OPPORTUNITIES AND CHALLENGES OF USING HUMAN RESOURCE ANALYTICS IN BUSINESS.**

A. <u>**Opportunities**</u>

Opportunities include the favorable scope of something. Here when we talk about opportunities of HR analytics, we mean the favorable scope or outcome that may arise from using this tool. HR analytics has got various opportunities which are found by the organization while using or implementing this tool. Here are some opportunities for using and implementing HR analytics which are listed below:
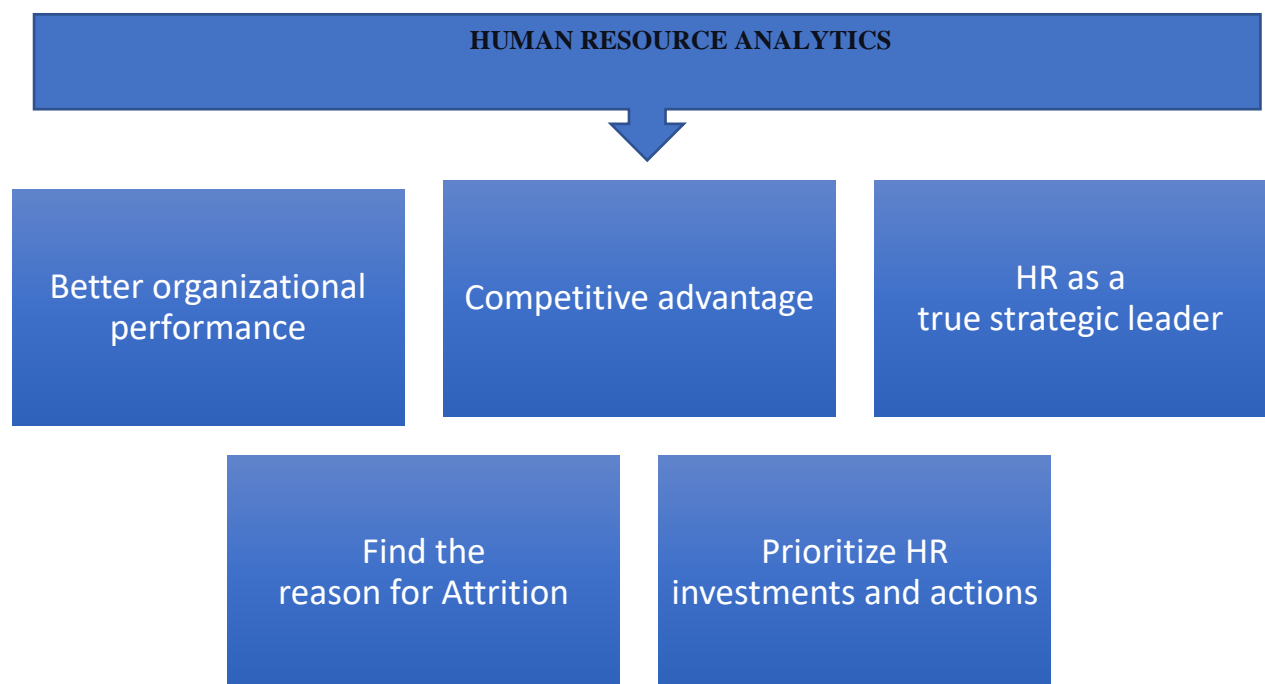

Fig 2: Opportunities of Using Human Resource Analytics

Opportunities for Using HR Analytics in Business:

1. **Better Organizational Performance**: HR analytics enables businesses in a better understanding of the workforce and building trust among employees resulting in employee's performance improvement. This enables organizational performance improvement.

2. **Competitive Advantage**: HR analytics enables HR professionals and managers to make data-driven decisions and influences the way the HR function of an organization is managed. It manages the organization by linking HR function to organizational objectives. HR analytics allows strategic decision making leading to competitive advantage by performing better in financial and operational measures.

3. **HR as a True Strategic Leader:** HR analytics helps businesses to communicate good decisions within the organization. The decisions are analyzed through tactical and strategical alliances i.e., decisions are now not based on predictions. It allows the HR department to act as a strategic leader as it provides meaningful insights.

4. **Find the Reason for Attrition:** As HR function focuses on planning, recruiting, training and retaining of employees. Business focuses on the satisfaction and health of its employees to gain organizational objectives effectively and efficiently. HR analytics enables organizations to know the reason for the attrition of employees. Organizations do invest in retaining valuable employees and reduce the attrition rate.

5. **Prioritize HR Investments and Actions:** HR analytics has enabled the HR department in a dynamic shift from the traditional system to the tactical and strategic system to shape and improve organizations. This has helped in bridging the gap of HR function role in the organization. Previously HR function was lacking behind due to the non-availability of analytics techniques to evaluate results. Thus, HR analytics has enabled HR in prioritizing in investments and actions.

B. CHALLENGES

It is rightly said that everything in the universe has both positive and negative aspects of it. From humans to technology everything around us faces both opportunities and challenges which depends totally on how we understand it or how we take such things, or how beneficial it is to us to an organization especially when we are talking about some technologies. Opportunities are favorable scope whereas Challenges are a provocation that hinders the process of happening. This study discusses the challenges faced by the organizations, its employees while using or implementing HR analytics
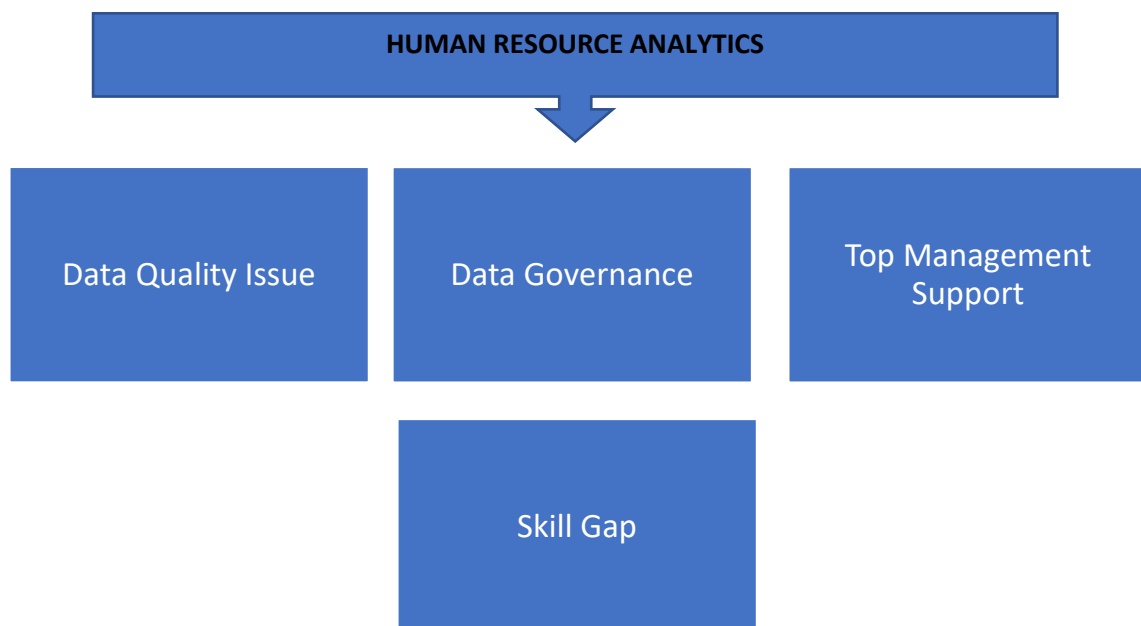

Fig 3: Challenges of using Human resource analytics

Challenges of Using HR Analytics in Business:

1. **Data Quality Issue:** HR analytics faces data quality issues as organizations have a huge amount of data which is not easy to collect, generate, and store easily. Data collected may have missing attributes or wrong attributes due to the lack of inaccurate data given by employees. There may be availability of duplicate data or data may get affected while transferring it from one source to another. The HR analytics tool generates results based on the availability of data but if they have data quality issues then the result may not be provided as expected.

2. **Data Governance:** Organisation lacks data governance while using the HR analytics tool. Data governance states the legality and ethicality of data. It states that data used by the business should use

ethically and legally. And when businesses use HR analytics tools it may hinder data governance as it uses modern ways and techniques to collect and interpret a large amount of data for making data-driven decisions.

3. **Top Management Support:** HR analytics lacks support of top management of business. As management is going through the traditional process for many years so businesses found it difficult to get their support in investing in such tools in an organization that collects and analyses employee-related data. The top management will ask for a greater return in investment to build a strong HR analytics.

4. **Skill Gap:** HR analytics requires analytical, understanding, and explaining business and business environment, quantitative analysis, psychometrics skills, relevant laws, and many other such skills to use this tool efficiently and effectively. HR analytics can be conducted only by those who have the required knowledge and skills and can develop contextual insights to provide relevant results to perform analytics. Otherwise, HR analytics may damage business.

CONCLUSION

With the technological development and advancement in industries, business has developed the use of HR analytics that improves organizational effectiveness. HR analytics quantifies and provides data-driven decision making by using statistical models and techniques. HR analytics handles all relevant data related to HR and interpret better result. Through this paper, it is analyzed that implementation and usage of HR analytics in business has been challenging as the HR professionals may lack the required skills and knowledge of using the HR analytics tool or there may be data quality or data governance issues. Due to such an issue's organization may not get the support of top management. Despite such challenges, HR analytics has been helping businesses in gaining competitive advantage, solving HR related problems, improving organizational performance, and has improved HR function. Knowledge and skill gap can be filled by learning and adopting certain knowledge and skills. Data can be used and maintained ethically and legally if the organization follows relevant policies and norms. The study explains that HR analytics usage and implementation have both pros and cons but if analyzed on a broader concept then opportunities of using HR analytics diminishes the challenges and lead to tremendous growth of the organization. It is analyzed that if an organization understands the right purpose of implementing HR analytics than they can get a better return on investment and businesses will accept and start involving HR analytics in HR departments. Soon HR analytics usage will rise and help the organization in getting evidence-based results and will transform the working of HR department from traditional to statistical decision making.

The right use of HR analytics at the right time and in the right business can lead to tremendous growth of HR analytics in an organization providing them to grow faster.

5.1 LIMITATION OF STUDY

Research has been done by going through previous researches being done. This research shows only the theoretical concept of HR analytics and no practical understanding has been done to understand the opportunities and challenges of using and implementing it.

ABBREVIATIONS:
HR- Human Resource/s
HUMAN RESOURCE ANALYTICS- Human Resource Analytics

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