AWARENESS, USAGE AND EFFECTIVENESS OF HR ANALYTICS TOOLS WITH SPECIAL REFERENCE TO INFORMATION TECHNOLOGY SECTOR IN INDIA

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ABSTRACT

Today, it takes a team to manage an organization's workforce. HR analytical tools can be used to manage personnel and track their performance online as a result of changing business needs and technological advancements. The application of HR analytics has increased business efficiency and improved employee performance in areas such as talent management, staff productivity, and employee turnover. In this paper, we'll look at HR analytics, its tools, and how it's used in various businesses. By utilising the data that is already available to the organisation, analytical tools can assist organisations identify issues with performance, staff retention and turnover, employee behaviour, etc. Because HR is underutilised in many organisations, this study is being done. Many organisations are undermining the use of HR, however in today's technologically advanced world, a variety of analytical tools have been developed that are used by significant firms. In this paper, we studied the awareness, usage and effectiveness of selected HR analytics tools in information technology sector in India. The descriptive research design and non probability convenience sampling is used for the research. The data is collected with well structured questionnaire from 140 employees working in IT sector. The findings of this research paper will be helpful to information technology sector by modifying and designing HR analytics tools for the betterment of their organizational growth.

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Keywords*: HR Analytics, Information Technology, Awareness, Usage, Effectiveness etc.*

Introduction

The purpose of human resource management is to use people as efficiently as possible to accomplish both organisational and individual goals. It primarily focuses on organisational functions linked to hiring, managing, and exiting. The HR department assesses employee performance and creates new training programmes for them in order to keep workers motivated and to maintain productivity growth. Frederick Winslow Taylor served as an inspiration when the early 20th century saw the emergence of HR as a distinct field (1856–1915). The phrase "human resource" was first introduced in 1893 by American institutional economist John R. Commons in his book "The Distribution of Wealth." However, the establishment of HR departments to oversee interactions between employers and employees did not occur until the 20th century.

The Indian information technology (IT) industry, which is expected to reach a US$ 225 billion market by 2020, has been instrumental in promoting India on a global scale. One of the most important development engines for the Indian economy is the IT-BPO sector. In addition to boosting India's economy, this sector also improves the lives of its citizens by actively contributing directly and indirectly to a variety of socioeconomic factors like employment, standard of life, and diversity. According to the National Association of Software and Service Companies, the sector has significantly contributed to changing perceptions of India from a slow-moving bureaucratic economy to a nation of creative entrepreneurs and a major player in the provision of top-tier technological solutions and business services.

Human resource analytics are a crucial component for transforming HR leaders in all industries. Analytics for human resources track each employee's performance and display trends for each person who plans to leave or remain on the job. It has recently been used by the IT industry to help with better HR decisions. This conceptual research article draws on secondary data sources, including firm reports on HR analytics and research journals, periodicals, and newspapers. According to analysis of the above studies, the Indian IT sector is only now beginning to consider using big data analytics to make better HR decisions. The Indian IT industry (Wipro, Infosys, HCL, etc.) is stated to be in its infancy, in contrast to western commercial

organisations that have produced various types of software, such IBM.

HR Analytic is the collection and application of talent data to improve critical talent. It is basically used for decision making using the available data, to predict employee turnover and identify better performers or predict skills that need to be Improved. HR Analytics is also known as people analytics. It enables your organization to measure the impact of HR metrics on overall business performances and make decision based on the data.

There are four types of HR Analytics:

- Descriptive Analytics
- Diagonostic Analytics
- Predictive Analytics
- Prescriptive Analytics

There are various professional HR Analytical tools used in today's organization like Visier, Tableau, QLIK, SPSS, Microsoft Excel.

Literature Review

- Cascio and Boudreau (2011) proposed a LAMP model in which the significance of deriving logical associations to explain the collected data, business impacts, and the likely outcomes are emphasized by the logical aspect. The study findings depicted that the model helped business leaders to conceptualize the design of HRA. Further, the study reported that with the help of the proposed model, the HRA design facilitated the identification of significant aspects, which in turn helped managements to strategize and attain favourable business outcomes.

- Watson (2011)conducted a study to analyse the factors that have an impact on HR analytics and identified a shortage of professionals. The requirement of a variety of skills, such as master communication skills, comprehensive knowledge about various analytic tools, ability to work with big data and datasets, etc., was identified. Thus, the study indicated that HR analytical performance varies with respect to an individual's background and demographics.

- Mishra, Lama and Pal (2016)123 explained the relationship between high rate of attrition and low talent retention and examined the role of predictive analytic domain within HRA. It was found that some HRM metrics that were viable for predictive modeling could be recognized and proposed for generating extensive effects of HR predictive analytics. Consequently, organizational performance was improved and execution costs related with HR interferences were reduced. Additionally, the relationship between high attrition rate and low talent retention was explicated in the study

- Lydgate (2018)210 attempted to define HR analytics based on a comprehensive review of 71 studies. Based on these reviews, the author presented an opportunity to comprehend the role enacted by analytics in the formulation and implementation of strategy across businesses. Further, the study scrutinized nine case studies to analyse its practicability and effect on US-based organizations. The findings based on indepth reviews demonstrated that real-life business cases were influenced by HR analytics. Nevertheless, the study failed to prove the competency of analytics in providing favourable business outcomes.

- Chadwick et al. (2015) 120 examined the impact of CEO resource orchestration on HRM functions. The study gathered the required data from 190 Korean companies spread across multiple fields. It was found that commitment-based HR systems were substantially affected by CEO-emphasized strategic HRM. This finding underlined the significance of lending practical support to the resource orchestration argument's elementary principle and the middle managers to operationalize the top management's emphasis on strategy

- R. Anita. Dr. N. Sumathi (2019), in their research paper entitled "A study on the measuring the factors of HR analytics on performances management in services sector of selected companies in Chennai" they found how performance management system influences employee performance. And how could the different stages in performance management system change employee performance respectively. The first objective is to review performance management system and employee performance, also the relationship between

them. The second objective is to analyse performance management system and their connection to employee performance based on the WERS 2004 dataset. The last objective is to find out the nature of the relationship between performance management system and employee performance and to develop a set of recommendations.

- Udhay Kailash and M Prathyusha (2020) in their research paper entitled "HR Analytics Methodical Measurement of HR Processes" they found that HR Analytics is more important as it assess how employees contribute to the organization, predicts workforce requirements, and links workforce utilization to strategic goals to improve the performance of the business. In his case the model of HR Analytics is widely accepted in the Pharma industry and can be replicated in other organizations of the same industry as well.

Research Methodology

The research methodologies involve the way in which the research is going to be conducted. This includes how you plan to collect data, use of statistical analysis, observations, etc. The purpose of research methodologies is to back up or support your collection method and key points of your research.

Objectives of the study

- To study the concept of HR Analytics.
- To study the awareness of HR analytics tools amongst employees in Information Technology sector.
- To study the usage of HR analytics tools in Information Technology sector.
- To study the effectiveness of HR analytics tools in Information Technology sector.

Type of Research Design	Descriptive Research Design
Sampling Technique	Non-Probability Convenience Sampling
Sampling Area	Pune City
Sample Size	140 (employees in IT sector)
Primary Data	Well-structured questionnaire
Secondary Data	Research papers, Articles, Books, Journals etc.
Data Analysis tools	IBM SPSS-20

Data Analysis

Awareness of Human Resource Analytics Tools used in Information Technology Sector

| Measurement tool	Very low awareness	Low awareness	Average	High awareness	Very High awareness
Rating Scale	1	2	3	4	5

HR Analytics Tools	Mean
Excel	4.2
Power BI	4.5
R	4.4
Tableau	4.2
Python	4.3
Average Mean	4.3
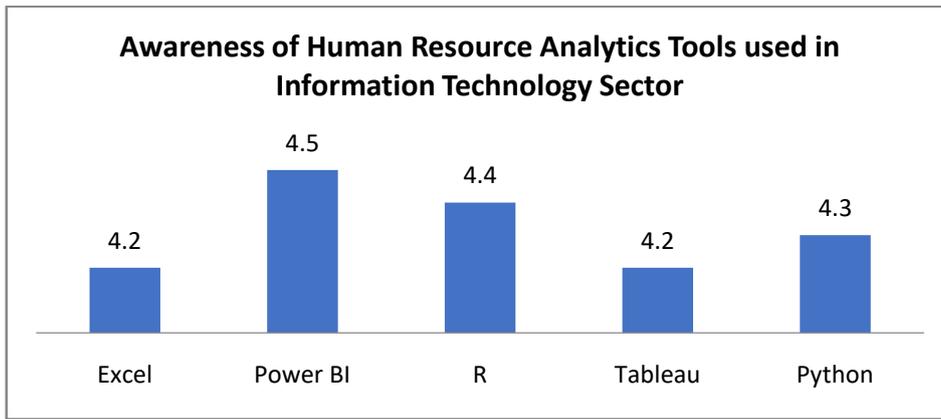
Awareness of Human Resource Analytics Tools used in Information Technology Sector

4.2 Excel | 4.5 Power BI | 4.4 R | 4.2 Tableau | 4.3 Python

Usage of Human Resource Analytics Tools used in Information Technology Sector

| Measurement Tool	Very low usage	Low usage	Average	High usage	Very High usage
Rating Scale	1	2	3	4	5

HR Analytics Tools	Mean
Excel	3.5
Power BI	4.8
R	4.6
Tableau	4.1
Python	4.2
Average Mean	4.2
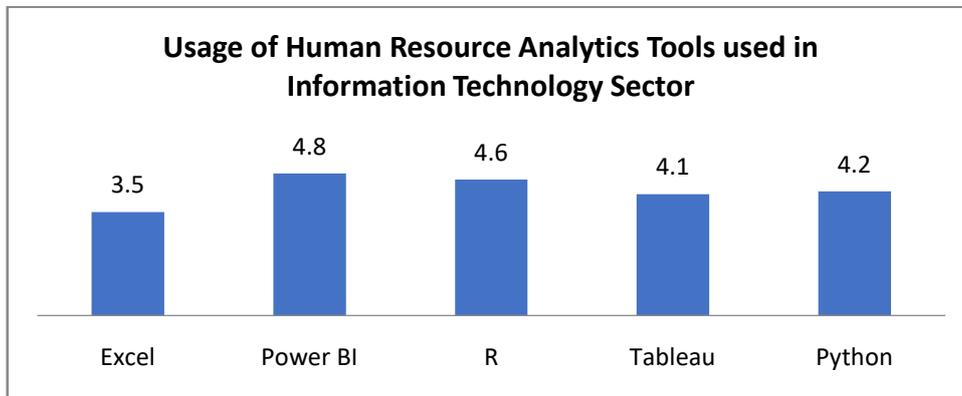
Usage of Human Resource Analytics Tools used in Information Technology Sector

3.5 Excel | 4.8 Power BI | 4.6 R | 4.1 Tableau | 4.2 Python

Effectiveness of Human Resource Analytics Tools used in Information Technology Sector

Measurement tool	Very low effective	Low effective	Average	High effective	Very high effective
Rating Scale	1	2	3	4	5

HR Analytics Tools	Mean
Excel	3.3
Power BI	4.8
R	4.3
Tableau	4.2
Python	4.4
Average Mean	4.2

Effectiveness of Human Resource Analytics Tools used in Information Technology Sector
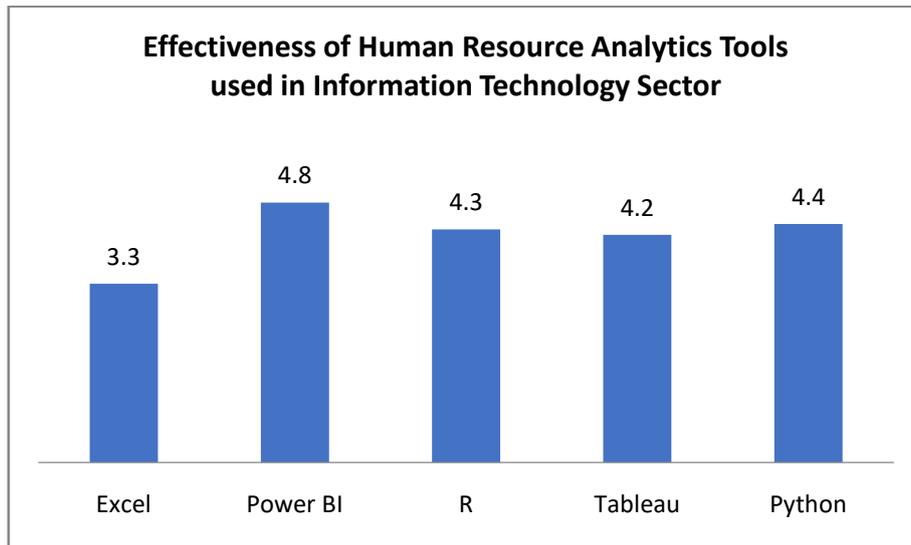

Ranking for the Significance of Human Resource Analytics Tools used in Information Technology Sector

HR Analytics Tools	Awareness	Usage	Effectiveness
Excel	5	5	5
Power BI	1	1	1
R	2	2	3
Tableau	4	4	4
Python	3	3	2

Significance of Human Resource Analytics Tools wrt HRM Activities in Information Technology Sector

HRM Activities	Mean
Talent Acquisition	4.1
Training and evaluation	4.5
Employee performance	4.8
Retention	4.3
Average Mean	4.4

Significance of Human Resource Analytics Tools wrt HRM Activities in Information Technology Sector
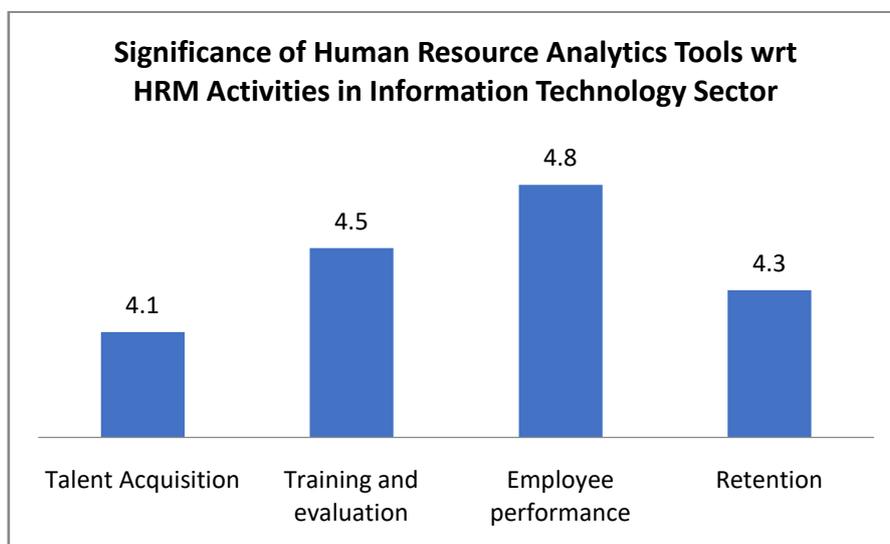
Hypothesis Testing
Hypothesis 1

- Null Hypothesis (H0): Human Resource Analytics Tools are not effective for information technology service sector.
- Alternative Hypothesis (Ha): Human Resource Analytics Tools are effective for information technology service sector.
- The researchers have tested the null hypothesis with the help of IBM SPSS 20. The researchers have applied Z test to check the null hypothesis. The P value identified is 0.01 which is less than 0.05 so the null hypothesis is rejected and alternative hypothesis is accepted at 5% level of significance.

Findings

- It is observed that Awareness of Human Resource Analytics Tools used in Information Technology Sector is high as the mean average is 4.3. The awareness about Power BI is highest (Mean 4.5).
- It is observed that Awareness of Human Resource Analytics Tools used in in Information Technology Sector is high as the mean average is 4.2. In todays scenario Power BI (Mean 4.8) is widely used as a Human Resource Analytics Tool.
- It is observed that Human Resource Analytics Tools are effective for Information Technology Sector as the average mean observed is 4.2. Power BI (Mean 4.8) and Python (Mean 4.4) are highly effective.
- Awareness, usage and effectiveness of Power BI as a Human Resource Analytics tool is very high as compared to other tools.
- Human Resource Analytics Tools are highly significant related to human resource management activities in information technology sector.

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