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# THE WILLINGNESS AND CHALLENGES TO ADOPT HR ANALYTICS AMONG SMALL AND MEDIUM –SIZED ENTERPRISES

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## **ABSTRACT**

*The emergence of data-driven HR has been one of the largest business trends in recent years. HR has just started leveraging data and analytics, but the majority of other functions have been doing so, for some time. Large and high performing organizations are using HR Analytics for evidence-based decision-making. However, the MSMEs have been slow to adopt this innovation. Our nation's socioeconomic development relies heavily on MSMEs. MSMEs contribute 37.54 percent of the GDP in total. Hence it is important to know how the productivity may increase using data available. This study aims at understanding the willingness of small, and medium enterprises in adopting and applying HR analytics in their businesses. It attempts to examine the challenges faced by the SMEs to adopting data analytics for better decision making. This research is based on an empirical study on SMEs in the Hubli-Dharwad region. The application and use of HR analytics offers several substantial problems for small companies. The results of this study highlight the challenges SMEs have in adopting and utilising the benefits of HR Analytics.*

**Keywords:** *Human resources analytics, SME, Data, Innovation Adoption*

## **1. INTRODUCTION**

As professionals and practitioners seek to understand how data may be translated into useful insights that improve organisational performance, the notion and use of data and analytics in

management have drawn more and more attention. This technique of data analysis takes data that is routinely collected by HR and links it to HR and organizational objectives. By doing this, we can demonstrate quantitatively how HR efforts are advancing the objectives and strategy of the company. This transformation that practitioners are embracing is HR Analytics.

HR Analytics is where HRM is demonstrated. Technology has made it possible to analyse and examine information in great depth, and this process is having a significant impact on corporate decisions. Alignment with strategy is essential, and benchmarking is out of date. Instead, you should examine your own measurements, carve out your own choices, and work toward the greatest outcomes. The sole purpose of HR analytics is to provide better insight into each of the human resource processes, assemble pertinent data, and then use this data to make well-informed decisions about how to improve these processes. Moving to analytics is difficult, thus it's crucial to identify the difficulties the companies face in willingly adopting HR analytics and make data-driven decisions.

### **1.1. DEFINITION OF HR ANAYTICS**

HR analytics is a process that integrates and assesses employee quantitative and qualitative data, bringing out useful insights to support improved decision-making in the future. In order for firms to make adjustments and plan more successfully for the future, HR analytics provides data-backed information on what is working well and what is not. The systematic identification and measurement of the human factors that influence company results is known as HR analytics. HR Analytics is an HRM innovation that allow firms to statically analyse HR data, processes, and human capital for making data-driven judgments and ignoring instinct. This tool aids in better decision-making and assesses how well the HR department contributes to company goals.

### **1.2. SMALL AND MEDIUM SCALE ENTERPRISES**

- A small enterprise, where the investment in Plant and Machinery or Equipment does not exceed 10 crore rupees and turnover does not exceed 50 crore rupees
- A medium enterprise, where the investment in Plant and Machinery or Equipment does not exceed 50 crore rupees and turnover does not exceed 250 crore rupees.

### **1.3. THE CONTRIBUTION OF SMEs TO INDIA'S ECONOMY**

Small and medium-sized businesses (SMEs) in India have become vital to the development of the country's economy. SMEs have a significant role in the Indian economy. The sector has contributed substantially to the creation of new jobs, innovation, exports and equitable economic growth. MSMEs are estimated to have a four times higher employment intensity than large businesses. Since this industry is regarded as India's "engine of growth," getting a SME loan or funding has gotten simpler over time. The country has seen a tremendous rise in this sector despite an obvious lack of infrastructure and numerous government measures in the past that discouraged people from opening their own firms. Currently, almost 36 million SMEs are responsible for creating 80 million jobs, 8% of the GDP, 45% of all manufacturing output, and 40% of all exports from the nation. (Nagpal, Jaiswal, & Panchal, 2022). More than 80% of all industrial firms in India that produce more than 8000 value-added goods are MSMEs.

## **2. OBJECTIVES OF THE STUDY**

The research has two main objectives which are listed below:

1. To outline the challenges faced by the SMEs to adopt data analytics
2. To examine the willingness of SMEs in adopting and applying HR analytics in their businesses.

### **2.1. LIMITATIONS OF THE STUDY**

The sample size was relatively small, the study only included 67 SMEs, which may not be enough to generalize the findings to the entire population of SMEs. The study was conducted only in Hubli-Dharwad region so the findings may not be applicable to SMEs in other regions, as the factors that influence the adoption of HR analytics may vary from region to region.

## **3. REVIEW OF LITERATURE**

HRM has become one of the most critical arenas in an enterprise. Human resource management (HRM) is defined as the effective and efficient use of human resources to achieve organisational goals. The general goal of HRM is to attract and retain suitable and contented personnel who contribute fully to achieving company objectives and goals. HR includes all forms of personnel who work for the company. Human resource has become a strategic advantage for the organisation in today's competitive business environment since it is rare, valuable, unique, and non-substitutable (Opatha, 2020).

HR Analytics offers a data-driven framework for dealing with workforce issues by utilising existing data to develop new perspectives. Enterprise executives can improve human resource

management by using software and a technique that applies statistical models to worker-related data. This results in smarter decision-making. (Fred and Kinange, 2015).

Kirtane (2015) HR analytics is the implementation of a methodology and integrated process for enhancing the quality and accuracy of people-related decisions in order to improve individual and organisational performance. The majority of HR analytics relies on statistical techniques, and it calls for great data quality, precise targets, analytical expertise, innovation, as well as broad acceptance that examination is a valid and beneficial for further development and execution to improve performance.

HR analytics is a multifaceted process that aids in the improvement of individual and organisational performance by assisting in the improvement of the quality of people-related choices. The majority of HR analytics relies on statistical techniques and analyses, which necessitates high-quality data, well set targets, competent analysts, leadership, and widespread acceptance that analytics is a valid and practical method of performance improvement. (Opatha, 2020).

Analytics in HR include more than just data collection and dashboard reporting. It entails a methodical approach to the use, organisation, analysis, and reporting of data. This transcends the idea of metrics and generates insightful data for business decision-making. Simply said, HR analytics is the study of HRM-related topics to give an organisation a competitive edge. HR analytics provides evidence-based guidance on how to advance the business from a human perspective. (D. P. J. Opatha, 2021)

### **3.1. CHALLENGES FACED BY THE SME's TO ADOPTING DATA ANALYTICS**

The application of analytics in HR operations throughout time has significantly simplified the work for HR personnel. Analytics also assists businesses in gaining strategic insights and developing the ability to swiftly and effectively estimate how labour trends impact sales and profits. The use of analytics in HR is also advantageous to employees in several aspects. However, there are various impediments that would prevent SMEs from fully utilising HR analytics.

### **3.2. CURATING DATA**

To successfully deploy analytics in HR, it is required to collect and arrange data from many operations and departments inside the firm. Data from numerous departments and business functions, including payroll and finance, must be collected, filtered, consolidated, and

assessed. Too many data sources work in isolation because of separate HR systems catering to different purposes. (C, 2018). Data scientists spend 85% of their time and effort collecting and cleaning data. Integrating and communicating these disparate data systems is time-consuming and labour-intensive (Vulpen, 2019). So, businesses require specialists who are able to collect the appropriate data as well as organise it.

### **3.3. INADEQUATE DATA ANALYTICS SKILLS**

It is a fact that there is a huge amount of data available, from payroll, employee engagement surveys, performance management, and other business departments like finance and operations but data interpretation presents a challenge. The amount of data generated by HR in the form of reports and metrics is not translated to relevant information, therefore this mass of data has no value and does not aid in management decision making (Kakkar & Kaushik, 2019). The harsh reality is that very few HR practitioners possess strong analytical abilities. The majority of them also need sufficient training in order to master the skill of turning data to meaningful insights. This makes it challenging and complex for most businesses to successfully apply analytics in HR.

### **3.4. PRIVACY CONCERNS**

Data privacy is a serious issue since technology puts people at risk. It is important that firms require to become accountable and capable of preserving sensitive employee information (Kakkar & Kaushik, 2019). HR professionals must take privacy into account when acquiring information about an employee or potential employee, especially from external sources. Furthermore, given how quickly data is being generated as a result of digital technology and online information exchange, it is crucial to consider whether firms have the right to gather employee data.

### **3.5. INADEQUATE IT-RESOURCES**

Analytics adoption in HR is an IT-intensive procedure. Numerous businesses, especially smaller ones, lack the infrastructure needed to put up an analytics program. In addition, businesses may find it expensive and time-consuming to build up the necessary infrastructure. This is one of the challenges why many firms choose not to integrate analytics into their HR procedures. Angrave et al. (2016) suggests that traditional HR Information System (HRIS) Analytics solutions lack the flexibility and power to perform predictive and

prescriptive analyses. Therefore, another significant obstacle to the implementation of HR Analytics is the existing state of information technology.

### **3.6. EMPLOYEE RESISTANCE**

Employees in the department lacks the necessary skills, competencies, and expertise to conduct out HR Analytics Angrave et al. (2016) which is a significant obstacle to the implementation of HR Analytics within enterprises. There are a list of reasons as to why employee resist to adopt HR Analytics i) Lack of technical expertise in the department ii) Adaptability to HR Analytics has yet to be accomplished. iii) To have a proper team that is solely focused on analytics (Keerthi & Reddy, 2019)

### **3.7. MANAGEMENT ISSUES**

Various management difficulties have also been identified by HR professionals at various levels i) A shift in management's perspective is required ii) It's challenging to persuade HR departments to use HR analytics iii) Recognizing the significance of HR data in decision making iv) a lack of funding for extensive implementations (Keerthi & Reddy, 2019)

## **4. RESEARCH METHODOLOGY**

The primary objective of the paper is to study the challenges faced by the SMEs to adopting data analytics. The secondary objective is to examine the willingness of SMEs in adopting and applying HR analytics in their businesses.

This research is based on an empirical study on SMEs in the Hubli-Dharwad region.

Primary data were gathered via a structured questionnaire. Statements in a closed-ended survey were to be rated on a Likert scale of 1 to 5, with 1 indicating "Strongly Disagree" and 5 indicating "Strongly Agree." The secondary data were gathered from internet sources, books, journals, research papers, thesis, and other publications. Descriptive analysis, t-test and ANOVA are used for data analysis.

## **5. DATA ANALYSIS AND INTERPRETATION**

Table 1 Demographic data

Enterprise type	Small	44.80%
	Medium	55.20%
No. of years of establishment	Less than 5 years	22.40%
	5 to 10 years	50.70%
	More than 10 years	26.90%

No. of employees	Less than 20	26.90%
	20 to 50	49.30%
	More than 50	23.90%

Source – Primary Data

The respondents comparatively were more from medium scale enterprises (55%) than small enterprise (45%). Half of the enterprises were 5 to 10 years old (51%) followed by enterprises who were more than 10 years of establishment (27%). Almost half of the respondents had 20 to 50 employees working for them. A little over quarter had less than 20 employees. 24% enterprises had more than 50 employees.

### **Hypotheses testing**

**H<sub>0</sub>: There is no effect of type of enterprise on willingness to adopt the HR analytics**

To test the above hypothesis, T test is conducted.

	Enterprise type	N	Mean	Std. Deviation	Std. Error Mean
HRA	Small	30	2.7500	.77774	.14200
	Medium	37	3.5856	.88943	.14622

Table 3 Levene's Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
H R A	Equal variances assumed	.019	.890	-4.042	65	.000
	Equal variances not assumed			-4.100	64.598	.000

Source – Primary Data

It can be seen from the above table that the significance value is less than 0.05 ( $p < .000$ ), hence the we reject the null hypotheses. This proves that there is a statistically significant difference the preference to adopt HR analytics among small and medium enterprises.

From the above table, it can be seen that medium size enterprises are more willing to adopt the HR analytics in comparison to small enterprises.

**H<sub>0</sub>: There is no effect of number of years of establishment on willingness to adopt the HR analytics**

To test the hypothesis, One-way ANOVA was implemented

<b>Table 4 ANOVA</b>					
HRA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.038	2	.519	.587	.559
Within Groups	56.550	64	.884		
Total	57.588	66			

Source – Primary Data

It can be interpreted from the table that the significance value is more than 0.05, hence, we fail to reject the null hypothesis. We can infer that there is no difference related to willingness to adopt the HR analytics among enterprises with varied years of establishments.

Table 5 Standard Deviation

	N	Mean	Std. Deviation
Less than 5 years	15	3.1444	.89502
5 to 10 years	34	3.1324	.85947
More than 10 years	18	3.4167	1.11033
Total	67	3.2114	.93410

Source – Primary Data

The table shows that enterprises more than 10 years of establishment are more willing to adopt HR analytics in comparison to others.

**H<sub>0</sub>: There is no effect of number of employees on willingness to adopt the HR analytics**

To test the hypothesis, one way ANOVA was conducted

<b>Table 6 ANOVA</b>					
HRA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.722	2	6.361	9.074	.000
Within Groups	44.866	64	.701		
Total	57.588	66			



It can be seen from the table that the significance value is less than .05 ( $p < .000$ ), hence the null hypothesis is rejected. It can be inferred that the number of employees in an organization has an effect on adopting HR analytics.

Table 7 Standard Deviation

	N	Mean	Std. Deviation	Std. Error
Less than 20	18	2.7407	.75021	.17683
20 to 50	33	3.1162	.93679	.16307
More than 50	16	3.9375	.69355	.17339
Total	67	3.2114	.93410	.11412

Source – Primary Data

From this table, it can be observed that enterprises with more than 50 employees are most willing followed by the enterprises with 20 to 50 employees. Less willing are those with less than 20 employees.

## **6. FINDINGS AND CONCLUSION**

In conclusion, the data analysis and interpretation have provided valuable insights into the willingness of enterprises to adopt HR analytics, shedding light on key demographic factors influencing this decision. The findings indicate that medium-sized enterprises and those with a larger number of employees are more receptive to embracing HR analytics compared to their smaller counterparts. Additionally, years of establishment did not show a significant influence on the willingness to adopt HR analytics.

The data showed that the majority of respondents came from medium-scale enterprises (55.20%) compared to small enterprises (44.80%). This suggests that medium-sized enterprises are taking a proactive approach to explore and leverage HR analytics solutions to enhance their human resources management practices and gain a competitive advantage in the market. On the other hand, small enterprises might face resource constraints or other challenges that could impact their readiness to adopt HR analytics.

Regarding the number of years of establishment, it was interesting to note that there was no statistically significant difference in willingness to adopt HR analytics among enterprises at different stages of development. This suggests that the potential benefits of HR analytics are not tied to the maturity of the organization but rather the recognition of its value and potential impact on improving workforce management.

Furthermore, the analysis revealed that the number of employees in an organization significantly affects the willingness to adopt HR analytics. Enterprises with a larger workforce, specifically more than 50 employees, exhibited the highest willingness to embrace HR analytics. This finding could be attributed to the complexity of managing larger workforces, where HR analytics can offer valuable insights and streamline various HR processes.

The insights gained from this data analysis provide organizations with valuable guidance for decision-making and resource allocation in their HR analytics adoption journey. Medium-sized enterprises and those with larger employee bases seem to be better positioned to capitalize on the benefits of HR analytics. However, smaller enterprises should not disregard its potential advantages and explore opportunities to incorporate HR analytics gradually, considering their unique needs and limitations.

As HR analytics continues to evolve and gain prominence in the field of human resources management, all organizations, regardless of their size or years of establishment, should recognize the transformative potential of data-driven decision-making in maximizing their workforce's efficiency and productivity. Embracing HR analytics is not just a technological advancement; it represents a strategic shift towards a more proactive and people-centric approach, empowering organizations to achieve sustainable growth and competitive advantage in today's dynamic business landscape.

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