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A Study On The Impact Of Data Automation In Hr Function

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Abstract: This study explores the impact of data automation in HR functions within the construction industry.It focuses on understanding HR professionals' perceptions toward automation, its influence on efficiency, cost savings, decision-making, and overall HR function effectiveness. The research highlights the growing importance of automating repetitive HR tasks, improving data accuracy, and enhancing decision-making processes. Using descriptive research and a sample size determined by a pilot study, data were collected through Likert scale and dichotomous questions. Findings reveal that while many employees recognize the benefits of automation in payroll processing, efficiency gains, and user-friendliness, concerns persist regarding complexity, data security, and minimal improvements in some areas. The study concludes by offering suggestions to bridge gaps and strengthen automation strategies to better meet organizational needs.

Keywords: Data Automation, HR Function, Effectiveness

1. INTRODUCTION

HR automation refers to the use of technology to manage and process data with minimal human input. It streamlines repetitive tasks such as attendance tracking, payroll processing, and maintaining employee records. Key HR functions—recruitment, onboarding, payroll, performance management, learning and development, compliance, employee engagement, and HR analytics—benefit significantly from automation. By integrating data across various systems, automation reduces manual entry, avoids duplication, and ensures consistency. Tools like applicant tracking systems (ATS) automate resume filtering and interview scheduling. Onboarding platforms guide new hires through documentation and training. Payroll systems handle accurate salary and tax calculations. Performance management tools

enable real-time feedback, while Learning Management Systems (LMS) personalize training experiences. Automation also supports compliance by keeping systems updated with legal changes. HR analytics platforms offer insights that aid strategic decisions. AI, robotic process automation (RPA), and cloud-based solutions are increasingly adopted in HR. A 2024 Deloitte survey shows over 60% of companies using some form of HR automation. Tech giants like IBM, Amazon, and Google use automation for large-scale hiring and engagement. Remote and hybrid work models further drive the need for digital HR systems. Small and medium enterprises are also embracing automation to stay competitive. Despite the advantages, challenges like job displacement fears, data privacy concerns, and reduced personal interaction highlight the need for careful implementation. Overall, HR automation enhances efficiency while enabling HR to play a more strategic role in organizations.

2. NEED OF THE STUDY

The study is essential to understand the real- time perceptions of HR Professional towards automation, how it influences various HR Functions, and whether it meets expectations in terms of efficiency, cost savings and decision making. By analysing the feedback of employees involved in HR roles, this research aims to bridge gap between the theoretical benefits of automation and the actual experiences of users and to provide some valuable insights to develop more automation tools in a cost-effective manner.

3. OBJECTIVES OF THE STUDY

- To study the impact of automation in HR function
- To identify the level of familiarity and usage of HR Automation in core HR activities
- To examine the perceived importance and effectiveness of HR automation tools among the HR Professionals
- To understand the concerns related to implementation of HR automation in the organization

4. SCOPE OF THE STUDY

The present study provides valuable insights into the practical implications of HR automation and its influence on core HR functions. It serves as a reference point for future research and organizational initiatives aimed at enhancing automation strategies. By identifying gaps between theoretical advantages and actual experiences, the study offers a framework for developing more efficient, cost-effective, and user-centric automation tools. Organizations planning to scale or refine their HR technology initiatives can leverage these findings to make informed decisions. Thus, the study contributes meaningfully to the advancement of digital transformation in the HR domain.

5. REVIEW OF LITERATURE

- **Raj Kamlesh Kumar Modi, Himanshu lad. 2025**

The researchers conveys that work automation is reshaping the landscape of HRM, offering numerous benefits while also presenting significant challenges. By understanding the implications of work automation and proactively addressing the associated issues, organizations can effectively leverage its potential to enhance HRM practices, create a more engaging employee experience, and drive business success in the digital age.

- **Arjun C Venu. 2024**

This research concludes that HR automation processes offers potential advantages such as increased job satisfaction and efficiency, it also presents challenges like heightened stress levels and shifts in job responsibilities. It is imperative to have effective management strategies and support mechanisms in place to harness the benefits of automation while addressing its potential drawbacks for HR employees..

- **Vineet Pandey, Amit Kumar and Sumit Gupta. 2024**

This article highlights the importance of digitalization for India's SMEs, noting challenges like high costs and limited technical skills. Starting with IoT or blockchain in key areas and leveraging government initiatives and expert support can help SMEs boost productivity and access new markets.

- **Umasankar Murugesan, Padmavathy Subramanian, Shefali Srivastava, Ashish Dwivedi. 2023**

The researcher used a quantitative approach, it could be investigated how AI based HR decisions have impacted company success and turnover in numerical terms. Because there are trust issues with AI, employees' perspectives and experiences with AI-based HR practices could be studied to gain more perspectives on this topic.

6. RESEARCH METHODOLOGY

This study follows a descriptive research design to observe and summarize current phenomena without manipulation. Data were collected through simple random sampling, ensuring equal selection probability for all participants. A pilot study with 20 respondents guided the sample size calculation using the formula:

Primary data were collected via Likert scale and dichotomous questions, while secondary data came from company journals and websites.

7. DATA ANALYSIS AND INTERPRETATION

CHISQUARE – CROSS TABULATION

Hypothesis

H0: Their is no relationship between gender and usage of automation tools

H1: Their exists a relationship between gender and usage of automation tools

TABLE SHOWING CHISQUARE TEST SIGNIFICANCE OF GENDER WITH AUTOMATION

Gender * Usage Crosstabulation

		Usage					
Gender		1	2	3	4	5	Total
	Female	16	17	11	26	21	91
	Male	18	17	20	13	15	83
Total		34	34	31	39	36	174

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.712[a]	4	.103
Likelihood Ratio	7.823	4	.098
Linear-by-Linear Association	2.310	1	.129
N of Valid Cases	174		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.79.

INFERENCE

The Chisquare Test was conducted on the sample data, and it was found that the significance value (p value) is more than 0.05 i.e. p>0.05. Therefore, the alternative hypothesis was rejected. Therefore, there is no relationship between the gender of respondents and usage of automation tools in the organization. So, null hypothesis was accepted

MANN – WHITNEY U TEST

HYPOTHESIS

H0: There is no significance difference between the gender of respondents with respect to familiarity of automation tools in the organization.

H1: There is difference between the gender of respondents with respect to familiarity of automation tools in the organization.

TABLE SHOWING MANN – WHITNEY TEST SIGNIFICANCE OF GENDER WITH AUTOMATION USAGE

Ranks

	Gender	N	Mean Rank	Sum of Ranks
Familiarity	Female	91	87.18	7933.00
	Male	83	87.86	7292.00
	Total	174		

Test Statistics

	Familiarity
Mann-Whitney U	3747.000
Wilcoxon W	7933.000
Z	-.091
Asymp. Sig. (2-tailed)	.927

a. Grouping Variable: Gender

INFERENCE

The Mann-Whitney Test was conducted on the sample data, and it was found that the significance value (p value) is more than 0.05 i.e. p>0.05. Therefore, the alternative hypothesis was rejected. Therefore, there is no difference between the gender of respondents with respect to familiarity of using automation tools in the organization. So, null hypothesis was accepted.

KRUSKAL-WALLIS TEST

HYPOTHESIS

H0: There is no significance difference between the designation of respondents with respect to importance of automation tools in the organization.

H1: There is difference between the designation of respondents with respect to importance of automation tools in the organization.

TABLE SHOWING KRUSKAL-WALLIS TEST SIGNIFICANCE OF DESIGNATION WITH IMPORTANCE OF AUTOMATION

Test Statistics

	Importance
Chi-Square	.687
df	4
Asymp. Sig.	.953

a. Kruskal Wallis Test

b. Grouping Variable: Designation

INFERENCE

The Kruskal Wallis Test was conducted on the sample data, and it was found that the significance value (p value) is more than 0.05 i.e., p>0.05. Therefore, the alternative hypothesis was rejected. Therefore, there is no difference between the difference of respondents with respect to importance of using automation tools in the organization. So, null hypothesis was accepted.

8. SUMMARY OF FINDINGS

- There is no significant association exists between gender and the usage of HR automation tools.
- There is no significant difference in familiarity with automation tools between male and female respondents.
- There is no significant difference across designations in terms of the perceived importance of automation tools.

9. SUGGESTIONS

- The organization can implement strong data security measures to address employee concerns.
- The organization could focus on enhancing the user-friendliness of HR automation tools to improve employee experience.
- The organization can develop more integrated HR systems that can work seamlessly across different HR functions.
- The organization could improve employee self-service options like real- time updates, mobile access and so on.
- The organization can develop structured training sessions to improve tool familiarity.
- The organization can enhance personalization in employee interactions through smarter automation.
- The organization can communicate the value and positive impact of HR automation.
- The organization can improve familiarity with HR automation through hands on workshops.

10. CONCLUSION

In conclusion, the study aimed to investigate the impact of data automation in HR functions. The findings indicate moderate adoption and awareness among employees, with positive effects noted in areas such as decision-making, compliance, and data security. However, challenges remain particularly regarding usability, system integration, and lack of personalization leading to only moderate satisfaction and limited perceived impact for some respondents.

By addressing these concerns through improved training, more user-friendly tool design, and better system integration, the organization can enhance both the effectiveness and acceptance of HR automation. Overall, the impact is moderately positive, with clear opportunities for further improvement and optimization.

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