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EMPLOYEE PERCEPTION OF INFORMATION TECHNOLOGY IN HR PRACTICES: A STUDY OF IT COMPANIES IN NAGPUR CITY

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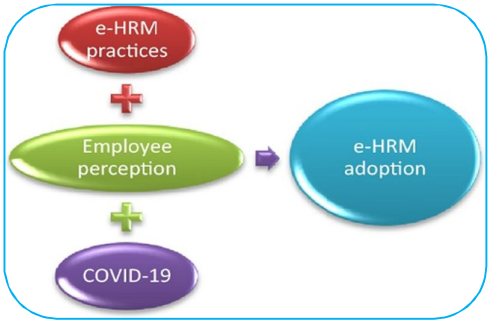
ABSTRACT



The implication of the use of information technology (IT) in human resource (HR) practices has revolutionized the working environment of contemporary organizations. The perception of the employees towards the implementation of IT in HR functions in IT companies in Nagpur City, Maharashtra, India, is the topic of the paper. The questionnaire would have been founded on the descriptive research design based on primary data involving 120 employees in ten IT companies based in Nagpur as the respondents to the questionnaire. The researchers check the perceptions in five dimensions, which are recruitment and selection, performance management, training and development, payroll and compensation, and employee engagement. The calculations were performed with the help of descriptive statistics, weighted mean scores, and chi-square tests. The results reveal that among the employees, a significant number of the employees (78.3) have positive perceptions of IT-enabled HR practices, especially payroll automation and online recruitment. Nevertheless, the issue of data privacy, the lack of digital literacy, and the lack of training on HR technology platforms were mentioned as typical barriers. It is concluded that, despite the fact that IT integration in the HR operations results in efficiency, accuracy, and experience for the employees, companies should invest in the digital skills gap and build trust in the data management systems to reap the most benefits of HR technology.

KEYWORDS: Employee Perception, Information Technology, HR Practices, HRIS, Digital HRM, IT Companies, Nagpur, HR Technology Adoption.

1. INTRODUCTION

The rapid pace of the development of information technology has fundamentally transformed how the management functions of human resources (HRM) are conceptualized, designed, and delivered in the organizations today. Online performance management boards and automatic payroll systems based on cloud-based Human Resource Information Systems (HRIS) and artificial intelligence-based recruitment tools have become a permanent part and parcel of HR professionals across the world. The IT sector, as an industry highly correlated with technology, provides a unique, captivating environment to observe the process of IT assimilation and acceptance at the staff level in terms of HR practices.

Nagpur, the Orange City of India, an up-and-coming IT center in the state of Vidarbha, Maharashtra, is an up-and-coming IT hub in the region, which has experienced tremendous growth in the past decade in its sector of IT and IT-enabled services (ITES). It houses a significant number of software development firms, IT parks such as MIDC Nagpur and Mihan SEZ, and an increasing number of digital businesses. Digital solutions in HR departments of these organizations are increasingly embraced in the hiring of talent, lifecycle management of employees, and organizational development programs.

The technological wave is massive, and the eventual success of the IT-enabled HR systems depends on the perceptions, acceptance, and behavioral participation of the employees with the systems. The perception of the employees follows cognitive, affective, and evaluative judgments that people develop about the tools and processes they participate in in their work environment. The favorable attitudes result in technology adoption, and the unfavorable attitudes, which are triggered by the fear of surveillance or being shut out by the digital divide or fear of change, can have adverse implications even for the most sophisticated HR technology investments.

The study undertaken in this paper would help fill a critical research gap since it would help examine how the employees who are employed in the IT firms in Nagpur City, which is a tier-2 city, where the dynamics of its IT industry are not similar to other metropolitan cities, like Pune, Bengaluru, or Mumbai. These impressions are significant to the concept of what can be leveraged upon by the HR managers and technology decision-makers in maximizing the human-technology interface in HR activities.

2. Objectives of the Research

The study is guided by the following specific objectives:

- To determine the general perception of the employees on IT adoption in HR practices in IT firms in Nagpur City.
- To analyze the perception of employees in certain HR functional areas such as recruitment, performance management, training, payroll, and employee engagement.
- To determine the challenges and issues that employees raise regarding IT-enabled HR systems.
- The purpose of the analysis is to examine the correlation between demographic factors (age, gender, experience) and employee perception of IT in HR practices.
- The purpose is to make evidence-based suggestions on how the HR technology implementation can be improved.

3. Research Methodology

The research design that is used in this study is a descriptive-analytical one that is based on primary data collection. The study takes a quantitative research method supported by qualitative information gleaned from the open-ended survey. The population to be targeted will be the employees working in IT companies registered and functioning in Nagpur city. The stratified random sampling was used to make sure that the representation was done with the categories of company sizes (small: less than 50; medium: 50-200; large: over 200). One hundred and twenty valid answers were obtained among the staff of 10 IT companies; the sample was proportional in terms of organizational levels (entry-level, mid-level, and senior-level). A self-administered questionnaire in the format of a structured questionnaire was created, which included four sections: (a) demographic profile, (b) the general perception of IT in HR practices (10 items), (c) the functional area-specific perception (25 items in five sub-scales), and (d) challenges and concerns (8 items). Measurement of responses was on a 5-point Likert scale, which ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The tool was pilot-tested among 20 respondents to clarify and make it relevant. The Alpha coefficient of reliability of the entire instrument was also found to be 0.871, which is a high internal consistency. The collected data were examined by means of descriptive statistics (frequency, percentage, mean, and standard

deviation); weighted mean score (to rank perceptions across the HR functional areas); and chi-square test (to test the association between demographics and perception scores).

4. Theoretical Framework

The two free theoretical frameworks used in the current paper are dependent on one another. To begin with, the conceptual model of how the employees will build perceptions regarding the HR technology is built upon the Technology Acceptance Model (TAM) designed by Davis (1989). TAM is founded on the assumption that attitude and behavior intentions to adopt the technology are dependent on Perceived Usefulness (PU), or the extent to which the user believes that the technology improves job performance, and Perceived Ease of Use (PEOU), or the extent to which the user believes that using the technology is pain-free.

Secondly, the Unified Theory of Acceptance and Use of Technology (UTAUT) coined by Venkatesh et al. (2003) is a continuation of TAM as it brings in another variable, social influence, and other facilitating circumstances as technology acceptance determinants. The social influence is considered as a peer and managerial consent to put the HR systems in place within an HR technology environment, and the enabling factors are the organizational consent, training availability, and technology supply.

The theoretical foundation of the measurement tool and the analysis plan of this research will be TAM and UTAUT as a combination. The dimensions of perception that will be operationalized based on these theoretical constructs that will be considered in this study are usefulness, usability, organizational support, data security, and engagement.

5. Data Analysis and Interpretation

5.1 Demographic Profile of Respondents

Table 1: Demographic Profile of Respondents (N = 120)

Variable	Category	Frequency	Percentage (%)
Gender	Male	72	60.0
	Female	48	40.0
Age Group	Below 25 years	28	23.3
	25–35 years	52	43.3
	36–45 years	28	23.3
	Above 45 years	12	10.0
Education	Graduate	38	31.7
	Post-Graduate	64	53.3
	Doctoral/Other	18	15.0
Work Experience	Less than 2 years	22	18.3
	2–5 years	45	37.5
	5–10 years	35	29.2
	Above 10 years	18	15.0
Organizational Level	Entry Level	40	33.3
	Mid Level	55	45.8
	Senior Level	25	20.8

The majority of the respondents are male (60 percent), aged 25 to 35 years (43.3 percent), postgraduates (53.3 percent), with a work experience of between 2 and 5 years (37.5 percent), as it has been seen in Table 1. The majority of the population lies in the middle level (45.8%), providing a good representation of the technology application within HR in the organizations.

5.2 Overall Perception of IT in HR Practices

Table 2: Overall Employee Perception of IT in HR Practices

Perception Category	Frequency	Percentage (%)	Interpretation
Highly Favorable	38	31.7	Very Positive
Favorable	56	46.7	Positive
Neutral	16	13.3	Undecided
Unfavorable	8	6.7	Negative
Highly Unfavorable	2	1.7	Very Negative
Total	120	100.0	—

According to Table 2, 78.3 percent of the respondents (both positive and the Highly Favorable) are within the positive perceptions of IT adoption in HR practices. The proportion of negative or highly negative perceptions were very low, at 8.4 and the neutral proportion stands at 13.3. It implies that the environment of HR technologies implementation in the Nagpur-based IT firms is relatively favorable.

5.3 HR Functional Area-Wise Perception (Weighted Mean Analysis)

Table 3: Weighted Mean Scores of Perception Across HR Functional Areas

S.No.	HR Functional Area	Weighted Mean	Std. Deviation	Rank
1	Payroll & Compensation Management	4.21	0.58	1
2	Recruitment & Selection	4.07	0.64	2
3	Training & Development	3.88	0.72	3
4	Performance Management	3.74	0.81	4
5	Employee Engagement & Communication	3.62	0.79	5
	Overall Grand Mean	3.90	0.71	—

Table 3 shows the weighted average scores of the perception in five HR functional areas. The highest score was the average score of the payroll and compensation management (4.21%), an excellent result, as it denotes that the accuracy and punctuality of automated salary processing are highly valued. The recruitment and selection came after with a score of 4.07, which affirmed the perceived value of digital tools to recruit. The middle positions were occupied by training and development (3.88%) and performance management (3.74%); the lowest score (3.62%) was of employee engagement and communication, which implies that the image of IT as a factor promoting the connectedness of employees was quite poor. The overall mean of 3.90% indicates that there is a positive perception, which is moderately high in all functional areas.

5.4 Challenges in IT-Enabled HR Systems

Table 4: Perceived Challenges in IT-Enabled HR Systems

S. No.	Challenge	% Agreement	Severity Level
1	Data privacy and security concerns	68.3	High
2	Inadequate training on HR tech platforms	61.7	High
3	Digital literacy disparities among employees	54.2	Moderate-High
4	System downtime and technical glitches	47.5	Moderate
5	Resistance to change among senior employees	43.3	Moderate
6	Lack of personalization in digital HR tools	38.3	Low-Moderate
7	Over-reliance on automated decisions	35.8	Low-Moderate
8	Perceived loss of human touch in HR	32.5	Low-Moderate

The greatest challenge, as shown in Table 4, is the issue of data privacy and security (68.3% agreement), followed by an issue that is slightly lower in the list of incomplete training on HR technology platforms (61.7%). The presence of disparity in digital literacy (54.2%) represents a significant structural hindrance, particularly in those organizations that have a heterogeneous workforce. The other issues that should be mentioned are system reliability issues (47.5%) and the resistance to change among older employees (43.3%).

5.5 Chi-Square Analysis: Gender and Perception of IT in HR

Table 5: Chi-Square Test – Gender vs. Perception of IT in HR Practices

Perception Level	Male (n=72)	Female (n=48)	Total	Chi-Square
Favorable (Highly + Favorable)	58 (80.6%)	36 (75.0%)	94	$\chi^2 = 2.41$
Neutral	10 (13.9%)	6 (12.5%)	16	df = 2
Unfavorable (Unfav. + Highly Unfav.)	4 (5.6%)	6 (12.5%)	10	p = 0.299
Total	72 (100%)	48 (100%)	120	NS*

*NS = Not Significant at 5% level of significance (p > 0.05)

According to the chi-square test, the correlation between gender and perception of IT in HR practices is not significant (2.41, 2, 299). It means that the perceptions of male and female employees in Nagpur IT firms are more or less similar in terms of HR technology, and the gender factor does not play an important role here.

5.6 Chi-Square Analysis: Work Experience and Perception

Table 6: Chi-Square Test – Work Experience vs. Perception of IT in HR Practices

Experience Group	Favorable	Neutral	Unfavorable	Total
< 2 years (n=22)	19 (86.4%)	2 (9.1%)	1 (4.5%)	22
2–5 years (n=45)	37 (82.2%)	5 (11.1%)	3 (6.7%)	45
5–10 years (n=35)	27 (77.1%)	5 (14.3%)	3 (8.6%)	35
> 10 years (n=18)	11 (61.1%)	4 (22.2%)	3 (16.7%)	18
$\chi^2 = 7.83$, df = 6, p = 0.048* (Significant)	94	16	10	120

*Significant at 5% level of significance (p < 0.05)

Table 6 indicates that the work experience and perception of IT in HR practices have a statistically significant relationship ($\chi^2 = 7.83$, df = 6, p = 0.048). The highest perceptions are registered among the employees with work experience of less than 2 years (86.4), and the minimum perceptions are registered among those with more than 10 years of work experience (61.1), with a big difference between the favorable and the unfavorable responses. The implication of this observation is the existence of a perception gradient that relies on the experience, whereby more experienced employees may be more rooted in traditional HR practices and less flexible to the digital transformation.

6. Findings of the Study

Based on the data analysis and interpretation, the following key findings emerge from the study:

- The level of positivity, or rather very positive perception, of IT use in HR practices by approximately 78.3% of the IT firms' employees in Nagpur City is a positive indicator of organizational climate to HR technology.
- Payroll and compensation management (weighted mean: 4.21) is ranked as the best since it introduces accuracy, speed, and transparency in the payroll processes of the employees due to the use of automated payroll systems.
- There is a high rating of digital recruitment and selection tools (weighted mean: 4.07) in terms of being quicker at shortlisting the candidates, reduced geographic limitations, and capability to conduct structured evaluation.
- The perception scores of training and development (3.88%) portray moderate-high satisfaction with e-learning platforms and digital skill development tools, but still, there are concerns about quality of content and engagement.
- The management of performance with the help of IT systems is rated lower (3.74%); the ambivalence of employees in the manner of algorithm-based performance management is also lower (3.74).
- The least perception rate was used on employee engagement and communication tools (3.62%), which means that digital HR systems are not prepared to embody the interpersonal richness of traditional means of engaging employees.

- The most significant challenge is identified to be the issue of data privacy and security (68.3%), followed by a deficiency of appropriate training on HR-related technologies and platforms (61.7%) and the differences in digital literacy (54.2%).
- The results indicated that gender is not a significant variable in influencing employee perceptions of IT in HR practices ($p = 0.299$), meaning that the sampled IT companies are gender-neutral in their perceptions.
- Work experience is a key predictor of perception ($p = 0.048$); new employees and employees with over 10 years of experience have relatively lower positive perceptions towards IT-enabled HR systems.

7. Discussion

The findings of this study offer several useful arguments that supplement the growing body of literature on digital HRM in the new Indian IT markets. The general impression (78.3% positive) is predisposed to the positive outcomes, which were also given by Rao and Naidu (2020) and Patel and Desai (2021), who provided high satisfaction of employees with the IT-enabled payroll and recruitment functions in the Indian IT companies. The high score of automation of the payroll system and online recruitment supports perceived usefulness (one of the core propositions of the TAM) since the two functions provide the employees with objective and observable benefits, such as receiving their salaries on time, having clear pay slips, and the opportunity to complete the application process quickly and without any inconveniences.

Of interest, especially, is that the scores of performance management and employee engagement in perception are lower. Employees are likely to distrust the performance management systems if they believe that they are more of a monitoring system rather than a developmental instrument. This is in line with Bondarouk and Ruel (2009) cautioning that the implementation of e-HRM systems can lead to resistance where employees fear being deprived of their autonomy or when they feel they are being spied on through the technology. The organizations are then urged to invest in communicating the purpose of the development of the digital performance systems and ensuring that the outputs of the algorithm are supported by the manager-led feedback discussion.

The prevalence of the problem of data privacy (68.3%) in the given research is particularly high in view of the changing data protection landscape of India in the aftermath of the Digital Personal Data Protection Act, 2023. Because the HR systems are still accumulating more personal data on the employees (from biometric attendance records to the outcomes of psychometric tests), the organizations are advised to adopt robust policies to govern the data and communicate them to the employees to build trust in the HR technology platforms.

The difference in perception on the basis of experience ($p = 0.048$) is consistent with Sharma and Bhatt (2018), who have found age and tenure as moderators of the HR technology acceptance in Indian firms. The practical implementation of this observation is that the onboarding program of HR technology must include experience-based learning paths with more intensive training and support to long-term employees, who may need more help with the process of transitioning out of the old HR operations and into the digital sphere.

The gender effect is insignificant compared to other studies in the world that reported gender differences in technology acceptance (Venkatesh and Morris, 2000) but is consistent with the more recent studies that have suggested that the gender differences in technology perception are likely to go down in highly technology-saturated industries such as IT. The balance of perceptions of HR technology in the Nagpur IT case, in which male and female employees are constantly engaged with the digital tools as the fundamental aspects of their working functions, appears to be professional immersion.

8. CONCLUSION

The study provides a detailed and primary data-driven assessment of the perception of employees with respect to information technology in the HR practices of the IT companies in Nagpur city. The findings demonstrate that IT implementation in HR activities is generally accepted by

employees; in particular, in regard to payroll processing and online recruiting, the effectiveness of the technology is directly translated into the refinement of employee experience. However, there is also a slight perceptual terrain revealed in the paper where the underperforming areas of digital HR are performance management and employee engagement. There are several contributions of the research. It is empirically generated primary data as an Indian IT hub, tier-2, which has been underrepresented in HR technology research. Ideally, it validates the TAM and UTAUT models in explicating the perceptions of HR technology within the Indian context. Practically, it gives data security of action-related priorities, sufficiency of training, and experience onboarding sensitive issues as priorities that an organization intending to get maximum use of its HR technology investments requires. The study can be further extended to longitudinal trends of employee perceptions, which can be tracked to assess the changes in the organizational culture in mediating the impacts of the IT-HR perceptions, and also, the study may be done in the non-IT sectors in Nagpur to enable the researcher to make cross-sector comparisons. With the gradual introduction of AI and machine learning into the HR decision-making process, the views of the employees concerning the algorithmic HR processes will become a significant research and practice boundary.

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