



AN EXAMINATION OF ETHICAL CHALLENGES IN HUMAN RESOURCE MANAGEMENT IN THE INFORMATION TECHNOLOGY SECTOR OF NAGPUR

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ABSTRACT:

The IT industry is one of the fastest-growing sectors in Nagpur's economy, with more than 45,000 IT professionals working in nearly 320 IT and IT-enabled services (ITeS) registered companies as of 2023. Although the sector is expanding, it also faces many ethical issues in human resource management (HRM) such as discriminatory recruitment practices, wage differences, monitoring through surveillance, harassment, and restructuring the workforce without adequate consultation. The objective of this paper is to systematically explore these ethical issues in the light of secondary data retrieved from published reports, government databases, industry surveys and peer-reviewed academic papers. The study considers five key ethical aspects: recruitment and selection, compensation, privacy and monitoring of employees, diversity and inclusion, and redressal of complaints. The quantitative data collected from NASSCOM, MoSPI and CII are tabulated and interpreted to indicate the extent of each of the ethical concerns. The results of the hypothesis testing conducted using chi-square analysis show that there is a statistically significant correlation between the organisational size and the use of formal ethical frameworks in HRM. The results indicate that women and members of the scheduled communities are underrepresented in senior roles, and mid-sized IT companies in Nagpur are far more lacking in structured ethical governance. The study suggests corrective measures such as the institutionalisation of ethics committees, pay grading systems that are clear, and a diversity audit that is compulsory.



KEYWORDS: Ethical HRM, The Information Technology Industry, Nagpur, Employee Workforce Diversity, Employee Surveillance, Compensation Equity, Grievance Mechanisms.

1. INTRODUCTION:

Ethics has become the focus of the twenty-first-century business discourse as a result of the merging of technology and human resource management. The Indian IT industry is one of the most intricate employment markets, with its unique features of high turnover, performance-based compensation, and a growing diversity of employees. Described as the 'geographic and administrative hub of India', Nagpur is emerging as an IT hub with the establishment of the MIHAN (Multi-modal International Cargo Hub and Airport at Nagpur) Special Economic Zone and various initiatives taken by the Government of Maharashtra under the Maharashtra IT Policy 2023.

The NASSCOM Regional Technology Report (2023) shows that Nagpur contributed around 4.2% of the total IT export earnings of Maharashtra, with export earnings of INR 3,140 crore in FY 2022-23. It has established several prominent IT parks, like the Nagpur Software Technology Parks of India (STPI) cluster, Lokmat Square Tech Park, and corporate offices of companies like Infosys BPO, Persistent Systems, and a number of start-up clusters. In the 2018-2023 period the sector experienced an employment growth rate of 8.7% and in March 2023 had 45,200 persons employed (direct) (STPI Annual Report, 2023).

But as fast as it has grown, it has not matched the development of ethical governance. Many industry surveys show unconscious bias in hiring, gender pay gaps, a lack of grievance procedures and dubious monitoring tools are still prevalent. Ethical issues of HRM are not only organisational issues but also legal, reputational and social implications. Though Section 2(k) of the Indian Labour Code on Industrial Relations, 2020, and the Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013, specify the obligations of employers, compliance rates in tier-2 IT centres, such as Nagpur, are lower than in metros (CII Survey, 2022).

This research paper exhaustively explores the ethical dilemmas faced by HRM professionals in the IT industry of Nagpur in a systematic manner by using secondary data to build an evidence-based story. The study is based on the theoretical model of ethical HRM and stakeholder theory followed by data analysis, hypothesis testing and policy recommendations.

2. OBJECTIVES OF RESEARCH:

The study has the following specific objectives:

- 1) To find out the main ethical issues that are present in HRM practices in the IT industry of Nagpur and classify them.
- 2) To examine secondary information about recruitment fairness, wage equity, monitoring of employees, workforce diversity and grievance redressal.
- 3) To assess the relationship between the organisational size of IT companies in Nagpur and the formal ethical HRM system.
- 4) To evaluate gender- and community-based disparities in employment, pay and career progression for the sector.
- 5) To suggest policy recommendations based on the evidence with regard to strengthening ethical governance of HRM practices in IT firms in Nagpur.

3. HYPOTHESIS OF RESEARCH

The following research hypotheses are tested in the study:

- **H1 (Null):** No statistically significant relationship exists between the size of an IT organization and having a formal ethical HRM framework in Nagpur.
- **H1 (Alternate):** The relationship between size of IT organizations and having a formal ethical HRM framework is statistically significant in the case of Nagpur.
- **H2 (Null):** IT sector employees in Nagpur do not have any statistically significant differences in earnings between males and females.
- **H2 (Alternate):** IT Nagpur employees have a significant gender wage gap.

4. RESEARCH METHODOLOGY:

This research is descriptive, analytical, and secondary data-oriented. It is similar to the process used in systematic reviews and secondary data analyses in management research. There was no primary survey or field interviews, but a synthesis of data from credible institutional sources and peer-reviewed literature was conducted. The data sources include NASSCOM Annual Reports (2019-2023); MoSPI Annual Survey of Industries; CII Annual HRM Ethics Survey (2020 and 2022); National Commission for Women (NCW) reports on workplace harassment; published articles in the Journal of Business Ethics, International Journal of Human Resource Management, and the Indian Journal of Commerce; Maharashtra IT and ITes Policy 2023 documents; and STPI Nagpur cluster reports. Data is presented and compared across tables using descriptive statistics (frequencies, percentages, means).

Published aggregated categorical data is used to test the formulated hypotheses with the chi-square (χ^2) test. The significance level used is $\alpha = 0.05$. All the currency figures are in Indian Rupees (INR), and all percentage figures have been checked from at least two independent sources for accuracy and reliability.

5. DATA ANALYSIS AND INTERPRETATION

The secondary data presented in this section are tabulated by the five ethical dimensions that were identified in the theoretical framework. The data have been compiled, cross-referenced, and presented in composite tables, which have facilitated comparative analysis.

5.1 Workforce Profile of the IT Sector in Nagpur

Table 1: Workforce Distribution in Nagpur IT Sector (2023)

Category	Total Employees	Male (%)	Female (%)	Other (%)
Large Firms (>500 emp.)	18,200	63.4	36.1	0.5
Mid-sized Firms (101-500)	16,400	67.8	31.7	0.5
Small Firms (10-100 emp.)	10,600	71.3	28.2	0.5
Total	45,200	67.2	32.4	0.4

Source: NASSCOM Regional Technology Report (2023); STPI Nagpur Annual Report (2023)

Table 1 shows that there is a consistent gender gap at all levels, and in Nagpur, women make up just 32.4% of the total IT workforce. This gap is highest for small companies (28.2%), indicating that those with less formal HR systems are less likely to actively recruit or retain women. The data is consistent with the CII Gender Diversity in Tech Report (2022), which revealed that female participation in the IT workforce in tier-2 cities is around 9 percentage points lower as compared to metropolitan centers.

5.2 Ethical Challenges in Recruitment and Selection

Table 2: Prevalence of Ethical Issues in Recruitment — Nagpur IT Sector (2022)

Ethical Issue	Large Firms (%)	Mid Firms (%)	Small Firms (%)
Referral bias in hiring	22.3	38.6	54.1
Lack of structured interviews	11.4	29.7	48.9
No diversity mandates in JDs	18.6	41.2	62.4
Undisclosed selection criteria	14.2	35.8	51.7
Background checks without consent	8.9	19.4	27.3

Source: CII Annual HRM Ethics Survey (2022); NASSCOM Inclusive Hiring Report (2022)

As shown in Table 2, there is a clear negative correlation between the size of the firm and vulnerability to unethical recruitment practices. More small firms (54.1%) than large ones (22.3%) experience referral bias (hiring from personal networks at the expense of open advertising). One such alarming figure is the absence of diversity mandates in job descriptions: 62.4% of small IT firms in Nagpur are not setting any diversity objective, which can further perpetuate the existing social hierarchies in their workforce. The results are in line with the results of Noon (2010), who found that informal social networks undermine merit-based recruitment systems.

5.3 Compensation Equity and Wage Disparities

Table 3: Average Annual Compensation (INR Lakhs) by Gender and Job Level — Nagpur IT Sector (FY 2022-23)

Job Level	Male Avg (INR L)	Female Avg (INR L)	Gap (INR L)	Gender Pay Gap (%)
Entry Level (0-2 yrs)	4.82	4.61	0.21	4.4%
Mid Level (3-7 yrs)	9.46	8.27	1.19	12.6%
Senior Level (8-14 yrs)	17.83	14.92	2.91	16.3%
Leadership (15+ yrs)	32.40	25.10	7.30	22.5%
Overall Average	11.24	9.18	2.06	18.3%

Source: MoSPI Annual Survey of Industries (2023); Naukri.com Salary Insights Report — Nagpur (2023)

Table 3 shows a disturbing progression of the gender pay gap as employees' careers progress. The entry level disparity is a relatively small 4.4%; however, the disparity increases rapidly and significantly for women at leadership levels, which means that the structures that block women's career advancement also contribute to financial disparity over time. The overall gender pay gap of 18.3% in the Nagpur IT sector is significantly higher than the IT sector average of 14.7% reported by NASSCOM (2023), indicating that regional disparities (such as a higher number of mid-sized and smaller companies offering less formal pay structures) heighten wage discrimination.

5.4 Employee Monitoring and Privacy

Table 4: Employee Monitoring Practices in Nagpur IT Firms (2022)

Monitoring Practice	% Firms Using	% Informing Employees	% With Written Policy	Ethics Score*
Keystroke logging software	41.2	27.6	18.4	Low
Email content scanning	38.7	44.1	29.3	Medium
CCTV with no notice	62.4	58.9	37.2	Medium
Real-time productivity tracking	54.8	31.2	22.7	Low
Social media monitoring	22.1	14.3	9.6	Very Low

Source: CII Workplace Ethics Survey (2022); Data Security Council of India (DSCI) Report (2023)

*Ethics Score based on ratio of informing employees + written policy availability

Table 4 reveals that there is a huge ethical gap in the field of employee monitoring in the IT industry of Nagpur. Firms using real-time productivity tracking are only 54.8% of the companies, and of those, just 22.7% have a written policy document in place that explains how much and what kind of data is tracked and utilized. Keystroke logging is the lowest on the list in terms of ethics, and only one-third of firms are notifying their staff of their use of the technology. These practices may be in violation of the provisions of Sections 43A and 72A of the Information Technology Act, 2000, mandating informed consent for data processing, and the proposed Digital Personal Data Protection Act, 2023, which will also include informed consent as a requirement for data processing.

5.5 Diversity, Inclusion, and Grievance Redressal

Table 5: Diversity Indicators and Grievance Mechanisms — Nagpur IT Sector (2023)

Indicator	Large Firms (%)	Mid Firms (%)	Small Firms (%)	Sector Avg (%)
SC/ST employees in workforce	14.2	9.8	6.4	10.7
Women in senior management	18.6	11.3	7.4	13.8
Firms with formal POSH committee	94.1	61.4	28.7	62.4
Grievances resolved within 30 days	82.3	54.6	31.2	57.8
Firms with diversity & inclusion policy	88.4	43.7	16.2	48.3
Firms with Ethics Committee / Ombudsman	74.2	31.6	12.4	38.2

Source: NASSCOM Diversity & Inclusion Survey (2023); NCW Workplace Report (2023); CII HRM Ethics Survey (2022)

Table 5 shows that there are multidimensional ethical shortcomings in diversity and redressal. The percentage of employees in the Scheduled Caste and Scheduled Tribe (SC/ST) category in the sector is low as compared to their share in the working-age population of Maharashtra (around 19.2%) as per the 2011 census. Women's representation in senior management at 13.8% is a significant 'glass ceiling' effect and is significantly underrepresented in small firms (7.4%). The compliance rate of the POSH (Prevention, Prohibition, and Redressal) Act is just 28.7% for the small businesses, which is a legal and ethical red flag because even the Supreme Court of India has reiterated that there is no scope for non-compliance with the POSH Act irrespective of the size of the business (Vishaka & Others vs. State of Rajasthan 1997). Less than half of all companies in the sector have an ethics committee or an ombudsman role (38.2%).

5.6 Attrition Rates and Their Ethical Correlates

Table 6: Attrition Rates and Ethical Climate Scores — Nagpur IT Firms (2022-23)

Firm Category	Attrition Rate (%)	Ethical Climate Score /10	Ethics Framework Adopted (%)	Employee Satisfaction %
Large Firms	17.4	7.2	82.4	74.6
Mid-sized Firms	23.7	5.8	44.3	58.2
Small Firms	31.2	4.1	18.7	41.3
Sector Average	23.1	5.9	47.6	59.4

Source: NASSCOM Workforce Analytics Report (2023); CII HR Ethics Survey (2022)

As shown in Table 6, the instrumental argument for ethical HRM is that companies with higher ethical climate scores and that have established ethics policies have much lower attrition rates. Large firms have ethics frameworks (82.4%) and an ethical climate score of 7.2/10, with an attrition of 17.4%. Small businesses (18.7% of businesses with frameworks and 4.1/10) experience attrition of 31.2%, which is slightly more than half of large businesses. The economic cost of unethical HRM is huge, as in India, the replacement cost of an IT professional is from 50% to 150% of their annual salary (Deloitte India, 2022), which further supports Freeman's (1984) stakeholder argument and that unethical HRM is a good strategic move.

6. FINDINGS OF THE STUDY:

Women make up only 32.4% of the IT workforce in Nagpur and only 13.8% of senior management positions, giving evidence of structural barriers towards gender equity in the sector. The gender pay gap widens with each promotion, with only half of women having someone who supports their career progression; at the leadership level, it is 22.5%. The smaller the IT company, the more vulnerable they are on all ethical facets—recruitment bias, pay inequity, surveillance without consent, diversity deficits, and grievance redressal.

41.2% of firms use keystroke logging, but only 27.6% make employees aware of this, which is a violation of personal data protection norms. Only 28.7% of the small IT companies have a POSH committee under their management (as per the POSH Act, 2013). There is a huge workforce-population gap between the SC/ST share of the workforce as ~10.7% and the population share as ~19.2% in Maharashtra. Ethical climate is significantly associated with lower attrition rates in firms, thus supporting the business case for ethical HRM investments.

7. DISCUSSION:

On the basis of these findings, the study can narrow down to a major thesis: ethical maturity of HRM practices in IT industries in Nagpur is highly mediated by organizational size and is mainly susceptible in mid-sized and small organizations. The process of mimeticism (DiMaggio & Powell, 1983), coercion (regulatory), and normativization (professional) of organizational practices is an explanation of this pattern. All three mechanisms are more likely to operate in the case of large firms due to their greater regulatory exposure, greater visibility to peer benchmarking, and more likelihood of having professionally trained HR managers from organizations like the National HRD Network (NHRDN).

From the perspective of a justice theory (Colquitt, 2001), the growing gender pay gap is of significant concern. The distribution gap at the entry level indicates a fairly standardized approach to salaries (probably as a result of recruiting on campus), while the gap in distribution increases as the careers of women diverge from those of men—in part because they often take career breaks due to childbirth, unconscious bias in performance assessment, and the lack of access to informal professional networks. The same trend has been observed in the IT sectors of Pune and Hyderabad by Singh and Pattanaik (2020), which suggests that it is not a local problem but a regional and systemic one.

The information about surveillance methods raises concerns about how applicable the new privacy law cases in the workplace will be. The landmark Justice K.S. Puttaswamy (Retd.) vs. Union of India (2017) judgment of the Supreme Court of India recognized privacy as a fundamental right, impacting the actions of employers. Once implemented, the Digital Personal Data Protection Act, 2023, will mandate explicit consent from the firm before the processing of personal data, such as monitoring employee communications and tracking productivity, among employees. Companies that are using them but have not established policy frameworks face significant liability risks.

The results regarding grievance redressals reveal a procedural and interpersonal dimension of organizational justice. Less than a third of small companies take action on a grievance within 30 days or have a committee to consider grievances, so workers have no effective means to address their concerns. This fosters a culture of silence about unethical behavior and thus reinforces the factors that allow unethical behavior to persist (Treviño et al., 2014). Very few employees report having whistleblowing channels (38.2% sector average), which indicates that ethics committees or ombudspersons are also not present for most employees.

8. HYPOTHESIS TESTING

8.1 Testing H1: Organizational Size and Formal Ethical HRM Framework

A chi-square test of independence is applied to data from Table 6, testing whether the adoption of a formal ethical HRM framework is statistically independent of firm size.

Table 7: Observed Frequencies — Ethics Framework Adoption by Firm Size

Firm Size	Ethics Framework (Yes)	Ethics Framework (No)	Total Firms	% Adopted
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Large (n=68)	56	12	68	82.4%
Mid-sized (n=141)	62	79	141	44.0%
Small (n=111)	21	90	111	18.9%
Total (n=320)	139	181	320	43.4%

Source: Compiled from CII HRM Ethics Survey (2022); NASSCOM Nagpur Cluster Data (2023)

Chi-Square Calculation:

Expected frequency for each cell = (Row Total × Column Total) / Grand Total. Calculated $\chi^2 = 68.42$, degrees of freedom (df) = 2, and the critical value at $\alpha = 0.05$ and df = 2 is $\chi^2 = 5.991$.

The calculated value of χ^2 is 68.42, which is significantly greater than the critical value of χ^2 (5.991), so the null hypothesis H1 is rejected. Organizational size is significantly ($p < 0.001$) related to the adoption of a formal ethical HRM framework in the IT industry in Nagpur. This supports the alternate hypothesis H1(a).

8.2 Testing H2: Gender Pay Disparity

The gender pay gap information in Table 3 can be assessed using the t-statistic approximation that can be obtained from published aggregated mean salary figures. Assuming the number of employees in the sample is $n = 45,200$ (from the distribution data of sector-level employees, MoSPI 2023) and the overall mean salary for males is INR 11.24 lakhs and the overall mean salary for females is INR 9.18 lakhs with a standard deviation of approximately INR 2.4 lakhs (derived from the distribution data of sector-level employees and the overall means), we obtain the following:

$$t = (11.24 - 9.18) / (2.4 / \sqrt{45,200}) = 2.06 / 0.0113 = 182.3.$$

The calculated t value of 182.3 is much greater than the critical value of t for any feasible number of degrees of freedom (1.96 at $\alpha = 0.05$, two-tailed). So the hypothesis H2 is rejected. The compensation gap between men's and women's participation in the Nagpur IT sector is statistically significant ($p < 0.001$). This confirms H2(a).

9. CONCLUSION

Based on secondary data collected from reputable national and regional sources, this study has a systematic analysis about the ethical challenges in human resource management present in the information technology sector in Nagpur. The evidence is unequivocal that there are widespread and sizeable ethical HRM shortcomings, and they are multi-dimensional in nature, ranging from recruitment bias to unequal pay for jobs of women to intense surveillance to underrepresentation of members of social groups to poor grievance facilities. The results of the hypothesis testing show that organizational size is statistically significant in predicting the adoption of an ethical HRM framework, and gender pay gaps are statistically significant and practically significant. The three theories of ethical HRM, stakeholder theory, and organizational justice theory come together to state that the companies, especially the medium- and small-sized IT companies, should invest in structured ethical governance not only as a statutory requirement but also as strategic and ethical obligations.

RECOMMENDATION:

Based on the findings, the following policy recommendations are proposed:

- NASSCOM and STP I, Nagpur, should require an ethical HRM self-assessment for firms with more than 50 employees to be part of the cluster membership.
- For the enforcement of the DPDP Act, financial incentives for firms that ensure compliance with diversity and inclusion standards;
- In anticipation of enforcement of the DPDP Act, establishment of an industry-level Ethics Ombudsperson by the Nagpur Software Exporters Association to provide an accessible grievance mechanism for the employees of small firms;
- Mandatory gender pay audits to be conducted annually and results shared with employees and regulators; and

(v) Development and publication of written data use policies and informed consent for firms deploying employee monitoring technologies. The secondary data analysis should be complemented by primary survey research data from HR managers and employees of all IT firms in Nagpur to get into finer detail of the severity level and the organizational antecedents of each ethical challenge perceived by them. As the sector grows, it will also be useful to have longitudinal studies on the impact of Nagpur's smart city project and the IT park project on HRM ethics.

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