University Administrators' Perceptions of E-Human Resource Management: A Comparative Analysis

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Abstract

Information technology plays a significant role in Pakistan, and electronic human resource management (E-HRM) is emerging as an innovative tool that offers organizations new opportunities and cost-efficient benefits. This study aims to investigate the differences in perceptions between university administrators from the private sector and the public regarding the use of E-HRM practices. A questionnaire (E-HRMPQ), consisting of fifteen items on a five-point Likert scale, was developed for this purpose. The reliability and validity of the instrument were confirmed through a pilot study. This study used a survey-based quantitative approach, utilizing a multi-stage sampling technique to select a representative sample from the target population. Data were collected from 387 administrators (from both the private and public sectors) through postal and in-person methods. The analysis, conducted using SPSS-21 software, revealed statistically significant differences between administrators in private-sector universities and those in public-sector universities regarding their perceptions of E-HRM practices. This study recommends that the Higher Education Commission (HEC) of Pakistan should take proactive measures to address the future challenges of E-HRM in public universities.

Keywords: University, E-HRM, Perception, Administrators, Human Resource Management.

Introduction

Advancements in globalization, innovation, and technology have revolutionized the field of human resource management (HRM). Today, HRM is recognized as more critical than financial and material resources, focusing on the recruitment, selection, development, and motivation of personnel to achieve organizational goals. With the increasing demand for new approaches to handle technological changes, individuals need to acquire new knowledge and skills to adapt effectively.

E-human resource management (E-HRM) emphasizes the application of digital technologies to manage human resources in organizations efficiently. HR professionals are now integrating internet-based technology to implement HR policies, strategies, and practices. The literature on E-HRM identifies three types of functions: operational, relational, and transformational. The operational aspect deals with administrative tasks such as payroll management and maintaining employee data through an HR website. The relational aspect focuses on recruitment, selection, and training processes facilitated by web-based technologies. The transformational aspect aims to develop a workforce ready for innovation by aligning web-based tools with the organization's strategic goals.

Stanton and Coovert [1] highlighted three main objectives of E-HRM within an organization: cost reduction, enhancing HR services, and fostering strategic alignment. Given these goals, there is a pressing need to enhance HRM practices using modern

technologies to ensure effective and efficient performance under the oversight of Pakistan's Higher Education Commission (HEC).

The rationale of the Study

In Pakistan, universities are primarily categorized into two sectors: public and private. Public sector universities adhere to government regulations and typically follow traditional HRM systems, while private sector universities, governed by private ownership, tend to implement more innovative HRM practices. Given these differences, it is crucial to investigate the perceptions of university administrators from both sectors to understand how E-HRM practices are perceived and applied.

Statement of the Problem

This study aims to compare how university administrators from public and private institutions perceive the use of E-HRM practices. It investigates whether these perceptions differ between the two sectors.

Objectives of the Study

The objectives of this research are as follows:
1. To analyze the differences in the perceptions of university administrators from public and private universities concerning the use of E-HRM practices.
2. To provide actionable recommendations based on the study's findings.

Hypothesis

It is hypothesized that there is no significant difference between the perceptions of university administrators in public and private universities regarding the implementation of E-HRM practices.

Purpose of the Study

As technology continues to advance, the role of information technology in transforming HRM in universities becomes increasingly significant. This study aims to identify how university administrators from the public and private sectors perceive the role of E-HRM practices and how these practices influence the management of human resources in their respective institutions.

Delimitation of the Study

This study focuses specifically on the administrators of academic departments within universities from both the public and private sectors in Pakistan.

Review of Related Literature

E-HRM refers to the implementation of HR policies and practices through internet-based technologies. It offers a platform where both HR managers and employees can access, modify, and update relevant information. One of the key advantages of E-HRM is its ability to reduce the number of HR personnel, as traditional management tasks can now be automated. The widespread adoption of E-HRM is believed to enhance both the efficiency and effectiveness of HR operations in organizations. Over time, organizations have shifted from manual record-keeping to more sophisticated information technologies. These technologies not only streamline business operations but also support HR functions by automating tasks, reducing the workload of HR professionals, and improving data management. Lengnick and Moritz [2] highlight that E-HRM systems provide portals through which HR professionals and managers can access and update data tailored to organizational needs.

One of the major drivers for adopting E-HRM technologies is cost reduction. Ruël *et al.* [3] define E-HRM as a method of implementing HR strategies through web-based technology. Lawler III [4] emphasizes that E-HRM can significantly reduce the time and costs associated with administrative HR functions. E-HRM also provides HR professionals with the tools to make more informed and timely decisions, improving organizational efficiency. By automating processes, organizations can reduce administrative costs, improve data accuracy, and enhance decision-making. E-HRM also enables HR to contribute more strategically to the organization by promoting knowledge management and fostering intellectual and social capital [2].

The Role of E-HRM Tools in Organizations

Organizations are increasingly adopting E-HRM tools as a means to streamline HR functions and integrate global HR practices. Globalization has played a key role in driving this transformation, as highlighted by Ruël *et al.* [3], who identified it as a crucial factor in shaping HR policies across borders. Keebler and Rhodes [5] pointed out that E-HRM technology should be designed to enhance the efficiency, cost-effectiveness, and accessibility of HR processes.

Strohmeier [6] further elaborated that E-HRM leverages integrated technological tools to create a seamless link between employees' knowledge and organizational objectives. These systems allow managers to gain direct access to HR-related tasks, improving communication, team management, and performance assessments [7]. According to Watson [8], E-HRM can be defined as the use of technology that facilitates direct access to HR services and workplace functions, including communication, reporting, team coordination, and knowledge management.

Research Methodology

This study follows a quantitative research methodology with a survey-based approach. In line with the educational system in Pakistan, 15 E-HRM practices were selected that are most relevant to university administrators.

Population
The population for this study includes administrators from both public and private universities recognized by the HEC in Lahore and Gujranwala, Punjab province, Pakistan.

Sampling
A multi-stage sampling technique was applied. Initially, three public and three private sector universities were selected using simple random sampling. Following this, administrators from these universities were chosen using convenience sampling. In total, 387 valid responses were collected from the administrators.

Instrument of the Study
A self-constructed questionnaire was used to assess the perceptions of university administrators regarding E-HRM practices. The questionnaire consisted of 15 items on a five-point Likert scale. The validity and reliability of the instrument were tested through a pilot study, with the E-HRM practices questionnaire (E-HRMPQ) yielding validity and reliability scores of 0.82 and 0.85, respectively.

Data Analysis
Once the data was organized, statistical analysis was performed using the t-test to identify any significant differences between the perceptions of administrators from public and private universities regarding the use of E-HRM practices.

Results And Discussion

Table 1. The E-HRM practices employed by university administrators in public and private sectors

Statements	Public (Mean, SD)	Private (Mean, SD)	t-value	P-value	Cohen's d
I find the E-HRM system easy to use.	2.80, 1.15	3.60, 0.99	-2.35	0.02	0.77
I am motivated to work in the E-HRM system.	3.30, 0.98	4.10, 0.64	-3.05	0.04	0.98
I possess enough knowledge to operate the E-HRM system.	3.40, 1.09	3.90, 0.64	-1.76	0.08	0.64
I have received training in using E-HRM practices.	2.90, 1.18	3.40, 0.88	-1.82	0.07	0.61
The E-HRM system makes my work more engaging.	2.70, 1.22	3.50, 0.83	-2.58	0.01	0.89
Digital tools in the E-HRM system assist with job design and analysis.	3.00, 1.12	3.60, 0.82	-1.93	0.06	0.65
Video conferencing is commonly used to communicate in the E-HRM system.	3.15, 0.98	3.85, 0.58	-2.72	0.01	0.89
The E-HRM system helps me complete tasks and assignments on time.	3.35, 0.99	3.90, 0.64	-2.08	0.04	0.67
Learning activities within the E-HRM system are clear and understandable.	3.10, 0.97	3.90, 0.64	-3.08	0.00	0.99
My superiors are supportive of using the E-HRM system.	3.50, 0.88	3.95, 0.40	-2.07	0.48	0.70
The HR department spends less time advising heads of departments.	3.60, 0.82	4.10, 0.45	-2.39	0.02	0.88
I can easily retrieve necessary documents from the E-HRM system.	3.40, 0.94	4.00, 0.32	-2.69	0.01	0.95
The computer network system is useful in managing the division of work in the university.	3.15, 1.14	3.70, 0.86	-1.72	0.09	0.57
I enjoy exploring my talents globally through the E-HRM system.	3.10, 1.16	3.95, 0.69	-2.81	0.00	0.92
Overall, the E-HRM system supports organizational improvement.	3.30, 0.86	3.85, 0.49	-2.47	0.01	0.63

P < 0.05

Table 1 compares the E-HRM practices employed by university administrators in both public and private sectors. Significant differences were found between public and private sector university administrators on several practices:

1. Ease of use of the E-HRM system: Private sector administrators reported a significantly higher mean score (M = 3.60, SD = 0.99) compared to public sector administrators (M = 2.80, SD = 1.15), with a t-value of -2.35 and a P-value of 0.02. The effect size (d = 0.77) indicates medium significance.

2. Eagerness to work in the E-HRM system: Private sector administrators showed a higher mean score (M = 4.10, SD = 0.64) than their public sector counterparts (M = 3.30, SD = 0.98), with a t-value of -3.05 and a P-value of 0.04. The effect size (d = 0.98) reflects a high significance.

3. Sufficient knowledge to use the E-HRM system: There was no statistically significant difference between the two groups. The private sector (M = 3.90, SD = 0.64) had a slightly higher mean than the public sector (M = 3.40, SD = 1.09), with a t-value of -1.76 and a P-value of 0.08. The medium effect size (d = 0.64) was observed.

4. Training received for the use of E-HRM Practices: No significant difference was found. The private sector (M = 3.40, SD = 0.88) had a higher mean than the public sector (M = 2.90, SD = 1.18), with a t-value of -1.82 and a P-value of 0.07. The medium effect size (d = 0.61) was observed.

5. E-HRM system making work more interesting: Private sector administrators (M = 3.50, SD = 0.83) reported significantly higher scores than public sector administrators (M = 2.70, SD = 1.22), with a t-value of -2.58 and a P-value of 0.01. The effect size (d = 0.89) indicates high significance.

6. Digital tools for job design and analysis: No significant difference was found, though private sector administrators (M = 3.60, SD = 0.82) had a higher mean than the public sector (M = 3.00, SD = 1.12), with a t-value of -1.93 and a P-value of 0.06. The medium effect size (d = 0.65) was observed.

7. Use of video conferencing in E-HRM: Private sector administrators (M = 3.85, SD = 0.58) reported significantly higher usage of video conferencing than public sector administrators (M = 3.15, SD = 0.98), with a t-value of -2.72 and a P-value of 0.01. The effect size (d = 0.89) shows high significance.

8. The usefulness of the E-HRM system in task and job assignment delivery: Private sector administrators (M = 3.90, SD = 0.64) reported higher mean scores compared to public sector administrators (M = 3.35, SD = 0.99). The results of the t-test indicate a significant difference, with the effect size suggesting a medium significance.

These findings suggest that private-sector universities have a more favorable view of E-HRM practices compared to public-sector universities, especially regarding ease of use, engagement, training, and communication tools.

The findings show notable differences in the perceptions of university administrators regarding the use of E-HRM practices between public and private sector universities. In terms of performing learning activities, private sector administrators expressed a clearer understanding of E-HRM system processes compared to their public sector counterparts. The mean score of private sector administrators was higher, with a statistically significant result indicating medium significance. Additionally, when asked about the clarity of learning activities within the E-HRM system, private sector administrators reported a significantly higher level of clarity than public sector administrators, with the effect size suggesting a high significance.

Regarding support from seniors in using E-HRM, private sector administrators reported receiving more assistance than public sector administrators, though the difference was not statistically significant. However, there was still medium significance in this aspect, suggesting that private sector administrators perceive more helpful guidance from their seniors.

In terms of time efficiency, private sector administrators felt that the HR department spent less time advising department heads, which they found more beneficial compared to public sector administrators. This difference was statistically significant, with a high level of significance, highlighting the efficiency of the private sector in managing HR advisory processes.

When it came to easily tracing necessary documentation within the E-HRM system, private sector administrators again reported higher ease compared to public sector administrators. This difference was statistically significant, and the effect size suggested a high level of significance, indicating that private-sector universities have a more efficient system for documentation management.

The study further explored other factors, such as the use of digital tools for job design and analysis, and the role of video conferencing. Private sector administrators consistently reported more frequent use and perceived benefits of these technologies compared to public sector administrators. In general, private sector administrators had a more favorable view of how the E-HRM system supports their tasks, contributes to organizational improvements, and helps them explore talent in a global context. The findings overall suggest that private sector universities are more likely to benefit from the use of E-HRM practices in a more integrated and efficient manner compared to their public sector counterparts.

Conclusions

The research findings indicate a statistically significant difference in the use of E-HRM practices between public and private sector university administrators in the Lahore and Gujranwala divisions. The study confirmed that private sector universities demonstrate significant advantages through the availability and use of E-HRM tools. Administrators from these institutions perceive the usability of E-HRM systems as a means to enhance the effectiveness of HRM. This result aligns with previous

studies, such as that by Bondarouk *et al.* [9], who emphasized the role of information technology integration in HRM to improve employee performance and management systems. The findings further suggest that many HR professionals are successfully utilizing E-HRM practices to achieve better organizational outcomes, with the private sector benefiting more from these advancements.

Recommendations

Based on the conclusions of this study, several recommendations are proposed to help university administrators make effective use of E-HRM practices:

- Public sector universities should foster a more positive attitude towards E-HRM practices among their administrators and employees, encouraging them to embrace technological advancements in HRM.
- The adoption of E-HRM practices is likely to significantly uplift the performance of employees, managers, and other professionals. Therefore, both public and private sector universities should prioritize integrating these practices to enhance overall institutional efficiency.
- Training programs for HR personnel in both public and private universities in Pakistan should be designed more effectively to ensure administrators and staff are well-equipped to use E-HRM systems. Tailored training will help improve their understanding and the effective application of E-HRM tools, leading to better outcomes for the institution as a whole.

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