Data Modelling in EHRM: Influencing Factors of Employees' Performance

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Abstract

Data science and data analysis have been increasingly used to tackle issues in the modern age, particularly in the fields of management and engineering. We used multiple regression modeling and quintile regression modeling to develop and come up with fresh EHRM insight. The systematic framework of Employee Performance is built on three aspects that are E-Training, E-Recruitment, and E-performance Management. Each component is made up of two measurements that show how employees feel about them. Empirical estimation results show (1) E-Training and E-communication are considerably strongly correlated with Employee Performance. (2) E-Recruitment and E-selection are all significantly positively correlated with Employee Performance. (3) There is a considerable difference in E-Performance management between the high and low quintiles. Employee performance is more likely to be affected by E-performance Management for those with a lower perceived rationale for E-performance.

Keywords: *E-HRM, Information Technology, Employee Performance, E-training, E-Performance, E-Recruitment.*

1. INTRODUCTION

Human resources are regarded as one of a company's most significant elements. Human resource management has grown increasingly difficult to regulate around the world as the company has gotten more globalized (Celaya, 2015). It is difficult to cling to a concrete notion of managing talent across the organization and globally due to the quickly technological and learning opportunities. HRM operations must become simple as a result of the adoption of cloud computing for e-HRM. The majority of today's leading MNEs use sophisticated E-HRM to manage their human resources effectively and efficiently (Mathis &

Jackson, 2009). According to (Mishra, 2010) Cloud-based E-HRM, is a new challenge in HRM since it simplifies HR managers' work while lowering the cost and effort invested in HR operations. That is the time at which HRM becomes transformative because HR personnel is completely receptive to new developments in HRM and how they affect employee actual quality from that point forward (Bondarouk & Ruel, 2009). In this study, it was determined to address the study's goal and methodology, as well as the review of literature and discussions, as well as the findings and possible trends. This study aims to examine employee job performance in the context of e-HRM. The purpose of this research is to look into how E-HRM has been linked to employee performance in empirical studies. This research contributes to existing knowledge by providing a conceptual assessment of how e-HRM affects employee performance.

2. Literature Review

This study provides a literature analysis by concentrating on an empirical overview of E-HRM and employee performance, with special attention paid to E-HRM converging and its effect on employee performance.

E-HRM

E-HRM can be concerned with the efficient use of HR functions across a network such as the internet to achieve the organization's shared goals (Strohmeier, 2009). E-HRM is merely a supplementary service that aids in the smooth operation of an organization's HR administrative procedure (Bondarouk & Ruel, 2009). According to (Voermans & Veldhoven, 2007) E-HRM might be strictly defined as the additional assistance of the HR function in firms using ICT tools. Owners, managers, and employees may access real-time HR information from wherever, at any time. According to (Fisher, 2010) E-HRM is the use of web-based technologies to apply HR strategies, policies, and practices. Many HR functions are now cloud-based, as a result of the transformation of HR from personnel administration to digitization (Tripathi and Ghosh, 2018). Mainframe computers were introduced in the 1980s, and as a result, HRM shifted its focus to human management (Ghosh & Tripathi, 2018). The notion of E-HRM was not widely adopted by enterprises, and most HR practitioners relied on networks to perform their organization's HR functions (Swart & Kinnie, 2003). In the twentieth century, the word "E-HRM" was widely used in businesses. Managers' workload is lessened by e-HRM, which frees them up to focus more intently on employee job performance. The primary goal of HRM, according to Opatha (2011), is to create and maintain a sufficient and contented workforce that makes the greatest individual contribution to corporate success and growth. The majority of HR operations were performed manually by HR professionals before the invention of E-HRM (Gerardine & DeSanctis, 1986). It was a lengthy and complicated procedure. Many firms attempted to integrate E-HRM technology into their organizations when it was implemented. Due to the obvious high initial cost of an E-HRM system, small businesses have avoided it, but large corporations have substantially engaged in it. He further noted that many organizations were forced to invest in E-HRM as a result of feasibility testing because that was the only way to avoid the more moment manual HR process.

Employee Performance

The entire performance of an organization is determined by the performance of its employees; bad employee performance is damaging to the business's ultimate effectiveness. As per (Perrin's Global, 2003**) E**mployee performance, is defined as employees' willingness to assist their firm flourish, largely via consistent effort. Organizations will not be able to reach their intended goals if their staff does not perform adequately. According to (Arnold & Wilmar, 2008), managers would agree that people make a significant impact in terms of creativity, organizational performance, profitability, and overall business because of the latest changes. Employee performance is critical for firms to thrive and perform at their highest levels. Pleased employees are those who can give their all for their company and adhere to it even in the worst-case situation. Organizations use a variety of influences to keep employees happy, and one of these is workplace health and safety. According to (Neda et al., 2009), some characteristics to compare real performance include the amount of production, the standard of products, on-time distribution, information sharing, and working experience and expertise.

3. Hypothesis Development

3.1 E-Training: Employees' e-training in the workplace can be classified into two categories: E-training and E-communication as shown in fig1.

Hypothesis First.

H1a: E-training has a positive effect on Employee's Performance

In an online context, e-training does this conferences, seminars, videos, textual studies, as well as other forms of e-training. Employee training via E-learning is a much more efficient way. Personnel from distant countries may participate in a training session with Zoom, Google meets, or another social media platform. Personnel would save a bunch of time as a consequence of these conveniences, and their productivity will improve (Arsovski et al, 2015). A human resources management practice to enhance employee performance is e-training (Hila et al., 2017). Because employees may access training resources through the Internet from anywhere in the world, e-training can be advantageous for enhancing employee performance (Christian et.al, 2007). Employees' enthusiasm to work can be increased by e-training, which can also promote engagement in company operations (Hila et al., 2017). (Razak et al., 2015). According to Kabbasi's research, e-training can boost employee performance and motivation. She continued by saying that media savvy and digital literacy is essential for success in all spheres of life, including the workplace (Kabassi & Virvou, 2004).

H1b: **E-Communication has a positive effect on Employee Performance.**

With the advancement of techniques, communication has become a critical component of every business. Personnel uses these e-communication technologies to get feedback immediately and actual data. Personnel that provides these e-communication tools improve the overall performance of the company while also improving individual performance, rendering e-communication among the most important aspects of modern business (Raulea &

Raulea, 2014). The benefits of using emails in the organization and associated productivity gains are well documented in the literature (Abodohoui, et al., 2014)

3.2 E-Recruitment

H2a: e-Recruitment has a positive effect on an Employee's Performance.

Various companies adopt various opportunities to recruit employees to their businesses. Firms, on either side, received CVs by email relatively soon when e-recruitment was implemented. According to (Dhamija,2012) e-recruitment assesses potential applicants online and can select them depending on the requirement of the company. Organizations may swiftly recruit candidates with little exertion, which will increase employee performance indirectly. E-recruitment, usually known as digital recruiting, Process of finding competent people to fill unfilled jobs in a firm via the internet (Epstein, 2003). E-Recruitment brings significant benefits in terms of time cost, searching the pool of candidates, and the quality of response (Ensheret et al, 2002).

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H2a: e- Selection has a positive effect on an Employee's Performance.

There's been an increase in the usage of technology to aid in the choosing process. Companies are increasingly using electronic selection (e-selection). It generally refers to the use of modern-day technology (for example, web-based online forms, web-based tests, and videoconference interviews) to assist organizations with tasks such as producing quality analyses, trying to gather respondent data, assessing individuals' KSAOs, and creating decision-making. Surprisingly, 74 percent of large firms already use electronic technology for hiring and selection, according to one poll (Cedar Crestone, 2010). Video conferencing over the Internet, for example, was used widely in the early stages of the selection process, which can achieve selecting experienced employees with cost reduction and time savings (Galanaki, 2002). Self-service applications allow managers to instantly enter the results of performance appraisal management, employee performance goals, results, and performance planning on their pages HR (Ball, 2001).

3.3 E-performance Management

H3a: e-performance management has a positive effect on Employee's Performance

The term "E-performance management" refers to a digital application for evaluating employee performance (Ravisha & Pakkeerappa, 2015). The e-performance method may evaluate the entire performance in the coming of the year without favoritism, it is a fair method. (Amstrong, 2009) states that in general, performance management schemes are prepared using ratings and are determined after a performance appraisal is carried out. (Rivai, 2014) states that performance appraisal refers to a formal and structured system that is used to measure, assess, and influence job-related characteristics, behavior, and results, including absenteeism levels. E-Performance helps the organization retain and motivate top talent by gaining insight into top performers across the enterprise (Jarrar & Schiuma, 2007). E-Performance increases organizations' business success by driving and fostering employee Performance with business objectives in a clear process. (Al- Raisi, et al., 2011).

H3b: e-Compensation management has a positive effect on Employee Performance.

Employee self-service enables every of the company's staff to electronically communicate their preferences on chosen interests and eases the burden on human resources management. If done correctly, it is thought that the delivery of employee benefits over the Internet will result in significant cost savings for the administration of human resources. Using self-service, a manager can confirm or make adjustments to stock management, rewards, and payroll. When managers need to award bonuses or verify their employees' work and ask them to consult with them on important decisions, they frequently opt for the application notifying the manager as a solution (Townsend & Bennett, 2003).

The research framework is shown in Figure 1.

4. Research Methodology

4.1. Model Construction Characterized by 3 aspects of employee performance factors, namely, E-Training, E-recruitment, E-selection, E- Performance Management, and E-communication, a regression model is established as follows:

$$EP \approx \beta_0 + \beta_1 ETG + \beta_2 ECN + \beta_3 ERCT + \beta_4 SSLCN + \beta_5 EPF + \beta_6 COMSTN + \varepsilon. \quad (1)$$

Left side, EP Shows the dependent variable, that is, Employee's Performance. On the right side, six independent variables are represented by acronyms shown in Fig.1

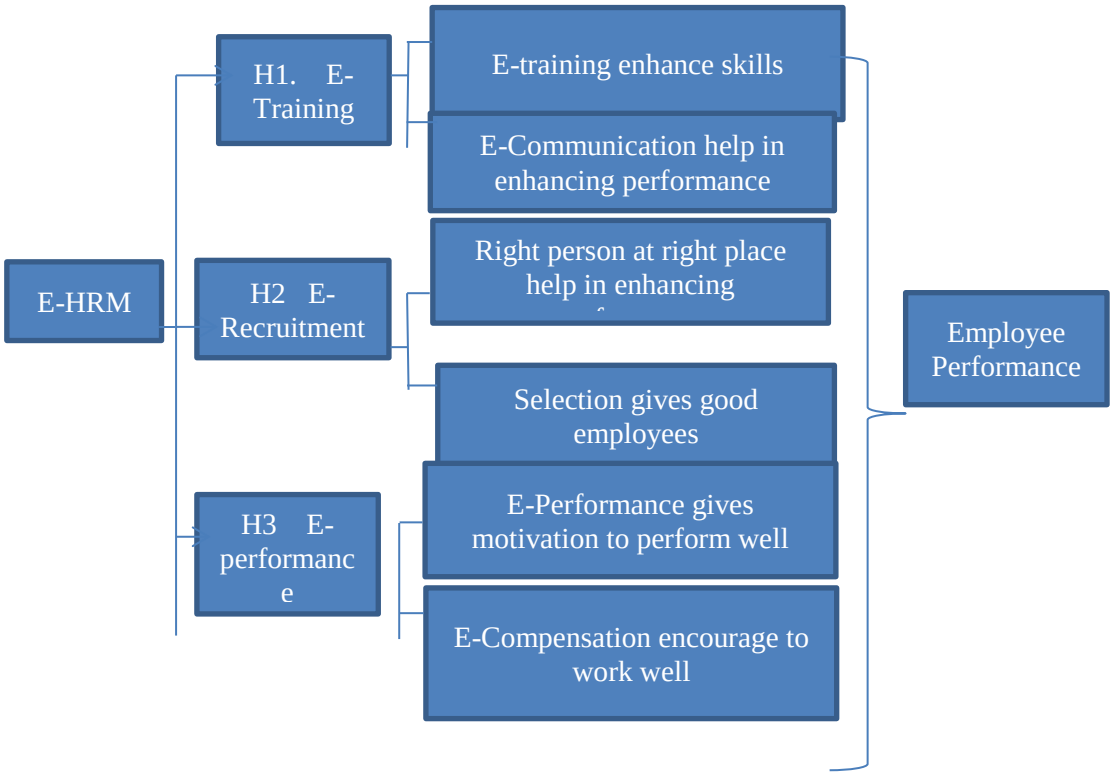

Figure 1: A research framework

Source: Self Compiled

To be more specific, ETG stands for an E-Training, ECN is represented by E-Communication. ERCT stands for E-Recruitment, SLCN stands for the perceived E-Selection, EPF stands for an E- Performance Management, and COMSTN stands for E-Compensation. β_1, β_2 . . . β_6 are the relevant regression coefficients in this case. The random error is represented by the term β0, which is a constant term.

4.2. Data Source-

. Researchers pick and create the matching instrument to evaluate the variables using data from India's public and private banks randomly, then perform an empirical study to evaluate the hypotheses. The major goal is to look into social issues that are both theoretical and practical, as well as to encourage transparency and dissemination of national sociological research. The researcher adopts a random sampling method. It is worth noting that 10968 employees from 478 public and private banks, result in an extremely big and compelling sample size.

4.3. ***Measures****.*

This section introduces the feature extraction pre-processing method as well as an extensive detailed description of each scale item (see Table 1). Pre-processing consists of three phases remove any missing values or faulty data first. A few of the data were missing because some respondents did not finish all of the questions. Modules A, B, and D provided us with the materials we needed for our study. Modules A and B, on the other hand, have full samples of 10968 participants since they can respond to all of the questionnaires, so module D only has a portion of the interview sessions since some of them aren't relevant to the survey. The specific technique is determined by whether or not the D module of the questionnaire is completed. Correlating samples that did not reply to a query about an Employee's Performance are completely eradicated, but only those concrete objects that have answered the central question at the very same time are maintained. In the social demographic characteristics, we processed control factors such as gender and education level. For gender and grade level, we create a 0-1 dummy variable.

5. Result Analysis

To do an empirical estimate on sample data, Stata is utilized. The descriptive statistics are shown first, and then the correlation analysis. Multiple regression is used to test hypotheses, and then the robustness of the results is demonstrated using quantile regression modeling.

Table 1

Variables	Items	Scales
EP	E-HRM help in enhancing Employee performance	Likert-type scale format rated 5 points is used. 1 “Strongly Agree,” 2 “Agree,” 3 “neutral,” 4 “disagree,” and 5 “Strongly disagree

ETG	E-training enhances the skills of employees	Likert-type scale format rated 5 points is used. 1 "Strongly Agree," 2 "Agree," 3 "neutral," 4 "disagree," and 5 "Strongly disagree
ECN	E-Communication help in enhancing the performance of employees.	Likert-type scale format rated 5 points is used. 1 "Strongly Agree," 2 "Agree," 3 "neutral," 4 "disagree," and 5 "Strongly disagree
ERCT	By E-recruitment and wide search, the Right person in right place helps in giving the good performance of employees	Likert-type scale format rated 5 points is used. 1 "Strongly Agree," 2 "Agree," 3 "neutral," 4 "disagree," and 5 "Strongly disagree
SLCN	Good E-Selection via online Tests, Video conferencing interviews, provides the best employees	Likert-type scale format rated 5 points is used. 1 "Strongly Agree," 2 "Agree," 3 "neutral," 4 "disagree," and 5 "Strongly disagree
EPF	E-Performance management gives the motivation to perform well	Likert-type scale format rated 5 points is used. 1 "Strongly Agree," 2 "Agree," 3 "neutral," 4 "disagree," and 5 "Strongly disagree
COMSTN	E-Compensation encourages to work well	Likert-type scale format rated 5 points is used. 1 "Strongly Agree," 2 "Agree," 3 "neutral," 4 "disagree," and 5 "Strongly disagree

5.1. Descriptive Statistics.

As per statistics, the population demographic ratio is 49.23 percent women and 50.77 percent men. Mean of the variance inflation 1.39, showing the variables are not multicollinear.
The ETG does have a 3.4 on average, which shows that the sample's assessment of senior management relationships is in the top boundary. The ECN, ERCT, and SLCN variables have a mean of 2.0 to 2.3, indicating sample's performance on these problems is substantially bad. The EPF variable has a mean of around 3.1, indicating that more respondents believe that some of their previous employment and talents may be used in their current positions. That legislation's mean is around 2.5, which is close to the question's maximum value. Because of

the negative response to the COMSTN question, the majority of the sample respondents indicated that they do not have the freedom to choose their everyday work schedules.
The study's variables have large standard deviations (SDs), suggesting that the sample's measuring strategy is efficient and that the variables tested are heterogeneous.

5.2. Correlation Analysis.

The Researcher looked at each independent variable's relationship to each dependent variable's correlation to perform regression analysis. Another covariate in multivariate analyses, except gender, all are positively related to said dependent variable at is 5% statistical level, as shown in middle column Table 3. Because the grading criteria of the two variables SLCN and EPF are the inverse of the criteria of another dependent variable, the negative sign much before the coefficient of SLCN and EPF represents a strong link.

The variables must be estimated using multiple regression analysis.

5.3. Multiple Regression Modelling.

Researchers utilize multiple regression to evaluate all hypotheses independently, as shown in Table 4. In columns (1), (4), (5), and (7), the ETG regression coefficient is positive on 1% significance level, showing the stronger worker's assessment link with management, and a greater degree of performance, validating the hypothesis H1a. The regression coefficient of ECN, on either hand, is not substantial, showing that an employee's observed connection with coworkers may not have a major influence on their performance. Hypothesis H1b is unsupportable. The regression coefficient of ERCT is positive on a 1% statistical level in columns (2), (5), (6), and (7), demonstrating that the more rational the individual's perceived e-training is, the higher factor of the performance of employees. The H2a hypothesis has been confirmed.

The regression coefficient of SLCN, on the other hand, is indeed not positive, implying that the influence of e-selection on employee performance is not as strong as projected. The H2b hypothesis has been disproved.

Table 2nd: Descriptive statistics and multicollinearity diagnosis.

Variable	Numbers	Mean	Std. D	variance inflation factor	1/ variance inflation factor
ETG	782	3.337	1.059	2.13	.469
ECN	506	2.23	0.683	2.11	.473
ERCT	511	2.064	0.646	1.05	.952
SLCN	758	2.34	0.541	1.04	.958
EPF	778	3.12	1.004	1.02	.977
COMSTN	765	2.50	0.908	1.01	0.988

Table 3:

Correlation analysis

Variable	EP	ETG	ECN	ERCT	SLCN	EPF	COMSTN	GEN	EDU
EP	1								
ETG	.279*	1							
ECN	.246*	.722*	1						
ERCT	.336*	.042	.029	1					
SLCN	-.104*	.013	-0.028	-0.201*	1				
EPF	-0.086*	-.084	-0.051	-0.019	0.022	1			
COMSTN	.160*	.132*	.101*	0.095*	.002	-0.035	1		
GEN	-.073	0.004	.010	-0.049	.054	0.040	-0.099*	1	
EDU	.156*	0.035	0.013	.022	.010	-0.058	-0.102*	-.009	1

Sig. level 5% (*means $P \leq 0.05$).

Table 4: Multiple regression

Variables	-1	-2	-3	-4	-5	-6	-7
ETG	0.294 (0.089)***			(0.088)*** 0.248	(0.083)*** 0.279		(0.082)*** 0.246
ECN	0.144			0.167	0.13		0.151
	-0.095			-0.093	-0.089 (0.074)***	(0.073)***	-0.087 (0.073)***
ERCT		0.625 (0.068)***			0.661	0.679	0.622
SLCN		−0.038	(0.046)***	(0.048)***	−0.060 -0.04	−0.048 -0.04	−0.073 -0.04
		-0.037				(0.044)***	(0.045)***
EPF			−0.170 (0.056)***	−0.175 (0.060)***		−0.146 (0.053)***	−0.147 (0.056)**
COMSTN			0.197	0.171		0.154	0.127
GEN	−0.110 -0.085	−0.119 (0.072)*	−0.108 -0.083	−0.069 -0.083	−0.073 -0.079	−0.076 -0.078	−0.044 -0.078
EDU	-0.088	(0.072)***	0.12	0.014	0.058	0.096	0.032

	0.049	0.308	-0.085	-0.088	-0.082	-0.08	-0.082
	2.28	1.884	(0.187)***	(0.241)***	(0.272)***	(0.283)***	(0.312)***
Constant	(0.161)***	(0.222)***	3.231	2.387	0.966	1.811	1.205
N	502	752	576	491	491	559	481
$_R$**2**	0.082	0.138	0.054	0.127	0.227	0.195	0.259

Bracketed figures represent reliable standard errors. ∗, ∗∗, and ∗∗∗represent the significance level at 10%, 5%, and 1%, respectively (∗means $P \leq 0.1$,
∗∗means $P \leq 0.05$, and ∗∗∗means $P \leq 0.01$).
The regression coefficients of ETG and ERCT in columns (3), (4), (6), and (7) are both positive at the 1% statistical level, showing that E-training and E-recruitment autonomy each have a substantial influence on Employee Performance. The H3a and H3b hypotheses were confirmed.

6. Regression Results

According to the findings of basic regression, frequent relationships have an impact on employee performance determined by E-training, E-performance management, and E-recruitment. Both considered job fit and reported work autonomy to have beneficial benefits on employee performance. The findings are in line with a prior study, which revealed that perceived congruence between training knowledge and job needs influenced job training satisfaction. The assessment of work autonomy demonstrates that it is a powerful predictor that has a favorable relationship with employee performance. According to the finding, Employees were happier with their work when they had greater autonomy. When workers believe their employment to have a high level of autonomy, Employees will get more job freedom, maybe lessening the constraints of core hours.

6.1. Quantile Regression Modelling.

The researcher did quantile regression to perform a heterogeneity test of various quantile regions to analyze the affecting components of Employee Performance. The Quantile regression separates data into many quantile values based on the dependent variable, then evaluates the relationship among them. The primary goal of Quantile regressions is investigate the structure of the independent variable's impact on the dependent variable and to assess the stability of the regression model.
Low quantile is the lowest 20% of the population, whereas the high quantile is the highest 20%. Table 5 and Figure 2 illustrate the outcomes of the analysis. It shows In both the low and high quantiles, the P-value for ERCT is 0.05 or less (P0.05), rejecting the null hypothesis and demonstrating that there is still a notable change in perceived compensatory rationale between low and high quantiles. At the low quantile (P0.05), the P-values of EPF and COMSTN is less than 0.05, implying that individuals with a poorer impression of job fit and work autonomy are substantially different from the typical respondents. The P-value of ETG in the high quantile (P0.05) is less than 0.05, indicating that employees' perceptions of their managers' relationships have a larger impact on their performance when they believe they have a good relationship with them.

The researcher elaborate on one variable, perceived compensation rationale, and the heterogeneity test was achieved (P 0.1) (see Table 6).

Table 5 demonstrates that the outcomes of quantile regression are substantially better in the high quantile area a fraction greater than that of simple linear regression, indicating that simple linear regression undervalues the impact of attributes compensating rationale. To put it another way, The effect of perceived salary logic on employee performance is understated by traditional linear regression. Employees will be more worried about remuneration when the perceived logic of compensation is poor, making the effects of compensation on employee performance more visible. There is an opposing scenario in the low quantile range, particularly in 0.2–0.4 interval quantile findings

TABLE 5: Quantile regression modeling results.

	EP	Coefficient	Std. Err.	*t*	*P*>*T*	(95% conf.)	(Interval)
	ETG	0.2	0.1418238	1.41	0.159	−0.0786781	0.478678
	ECN	0.2	0.1703923	1.17	0.241>	−0.1348141	0.534814
	ERCT	0.4	0.2037519	1.96	0.05	−0.0003644	0.800364
q20	SLCN	$-1.75e-16$	0.0695895	−0.00	1.000*	−0.1367405	0.136741
	EPF	−0.2	0.0866263	−2.31	0.021	−0.3702173	−0.0297827
	COMSTN	0.2	0.0874006	2.29	0.023*	0.028261	0.371739
	_cons	0.8	0.5179869	1.54	0.123*	−0.2178236	1.817824
	ETG	0.428571	0.2065284	2.08	0.039	0.022751	0.834391
	ECN	$-7.18e-15$	0.1531282	−0.00	1.000*	−0.3008909	0.300891
	ERCT	0.857143	0.1718596	4.99	0	0.519446	1.19484
q80	SLCN	−0.1428571	0.1041957	−1.37	0.171**	−0.3475976	0.061883
	EPF	−0.1428571	0.0996767	−1.43	0.152	−0.3387178	0.053004
	COMSTN	0.142857	0.124361	1.15	0.251	−0.1015072	0.387222
	_cons	1.285714	0.8899919	1.44	0.149	−0.4630844	3.034513

Note: ∗and ∗∗(means P 0.05; means P 0.01) denote the significance threshold at 5% and 1%, respectively (∗means $P \leq 0.05$; ∗∗means $P \leq 0.01$).

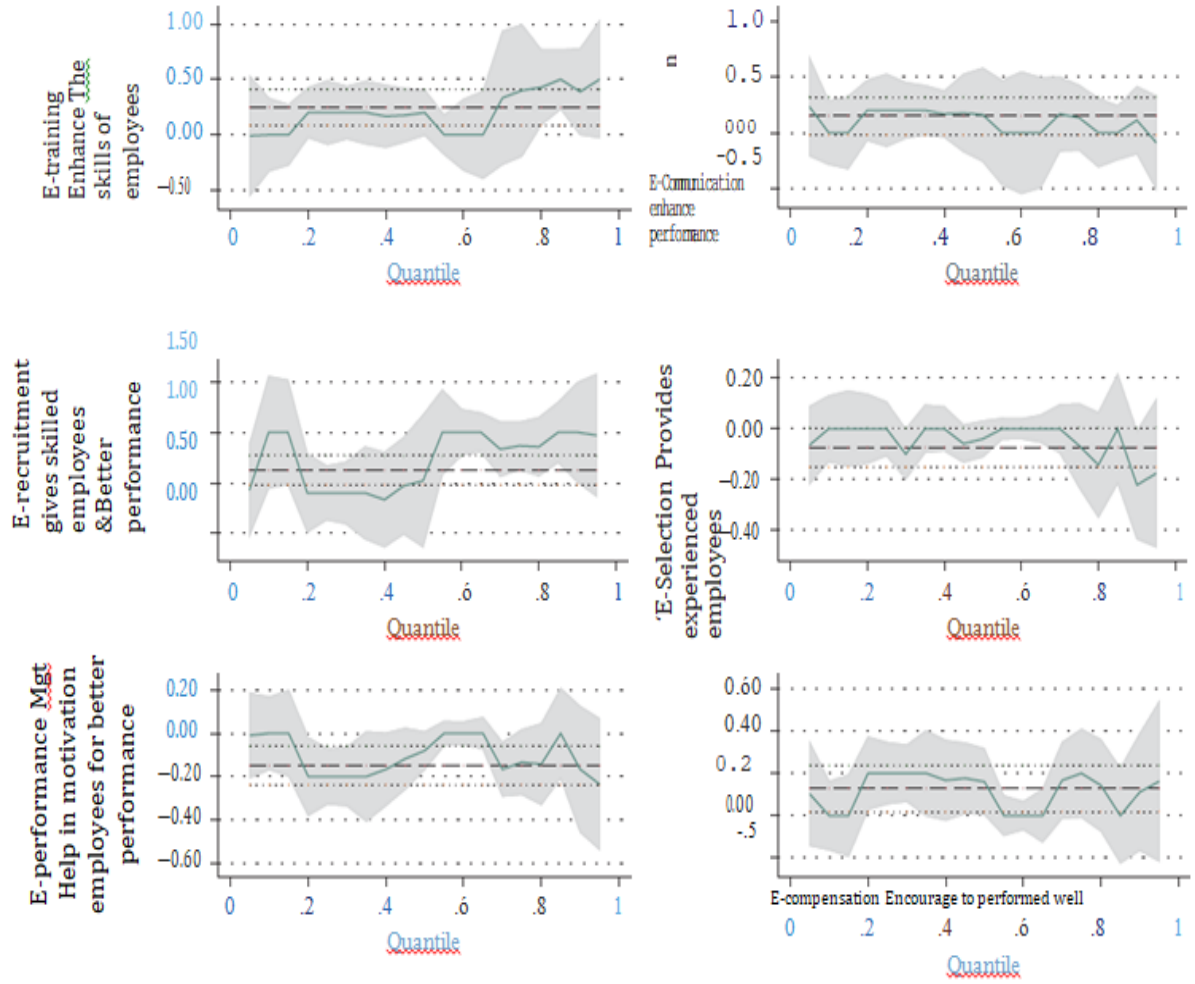

FIGURE 2: Quantile regression internal difference.

Figure 2 Quantile regression interval difference.

TABLE 6: The gap seen between high and low quantiles is measured by the heterogeneity test.

	ETG	ECN	ERC T	SLCN	EPF	COMSTN
F	**1.01**	**0.9**	**3.4**	**1.6**	**0.2**	**0.1**
Prob >*F*	**0.3**	**0.3**	**0.06***	**0.2**	**0.6**	**0.6**

Sign. level 10% *means $P \leq 0.01$).

Regression is substantially below that of normal linear regression, stating that the former overestimates the effects of the higher sample of apparent income cogency. In other words,

Ordinary linear regression provides a precise assessment of the dataset requirements and a more thorough overall rational notion of compensation. Once employees perceive that pay is acceptable, individuals are less concerned about money and are more concerned about career possibilities and interaction with friends. They could also assess if their employment aligns with their passions, abilities, degrees, and accomplishments in other areas. Employees who have a high impression of compensation's logic may be influenced by other incentives rather than pay. It agrees with prior research that income is the most significant element in keeping such employees, who believe they have not been compensated adequately for their special qualifications. Employees with a lower view of compensation rationality are much more impacted by their remuneration, whereas employees with a higher perspective of remuneration logic are less likely to be influenced by remuneration.

7. Conclusions and Implications

The researcher developed a framework with three factors, namely, E- training, E-performance Management & E-recruitment (Figure 1). According to the findings, employee performance is strongly positively connected with e-training, e-performance management, and e-recruitment, the consequence of performance differs dramatically across the maximum and minimum quantiles. The purpose of this study is to provide light on human resource management in the workplace. The HRM technique gets easier with the help of cloud technology to e-HRM, and as a consequence, currently, most of the major MNEs use this modern e-HRM to manage their human resources effectively and efficiently. E-HRM is becoming more widespread, and HRM operations are becoming less difficult, thanks to cloud computing and the use of IT assistance in HRM (Kumar, 2017).

HRM experts focus on the creation of Strategic Human Resource Management to lower staff expenses while boosting job performance. They switch from their traditional HRM to a web-based HRMS to achieve those goals. As per (Ghosh & Tripathi, 2018) E-HRM has earlier mechanized only a few HR processes. Employee work performance may be defined as an employee's average job-related tasks and how well they were completed.

Four major characteristics of E-HRM were addressed in this research. E-recruitment, e-training, e-performance management, and e-communication are all examined for their impact on employee performance. The author has looked at contemporary ideas like the ERG theory and the Management by Objectives theory, which both look at how E-HRM affects employee job performance. Because there are very less studies available on "E-HRM and employee performance," further research papers, theory building, and articles are needed to address the vacuum in the literature. E-HRM practices are rapidly expanding, rapidly changing, and progressively mounting platforms. The researcher emphasizes the information needed to investigate the success of E-HRM as a strategy for improving employee performance, using examples from several categories of applications.

Declaration: There is no Conflict of interest.

References

1. Al-Raisi, Abdulaziz & Amin, Saad & Tahir, Saad. (2011). E-Performance Systems: A Method of Measuring Performance. *IJWP*. 3. 50-57. DOI: 10.4018/jwp.2011010104.

2. Armstrong, M. (2009) Armstrong's Handbook of Human Resource Management Practice. 11th Edition, Kogan Page Limited, London.https://www.academia.edu/32280546/ARMSTRONGS_HANDBOOK_OF_HUMAN_RESOURCE_MANAGEMENT_P

3. Abodohoui, Alexis & Mohiuddin, Muhammad & Su, Zhan. (2014). E-Communication Adoption in Benin Public Administration: Challenges and Strategies. *International Journal of Business and Management*. 9. 43-55. 10.5539/ijbm.v9n1p43. **DOI:**10.5539/ijbm.v9n1p43

4. Arsovski, Zora & Stefanovic, Miladin & Arsovski, Slavko. (2007). Effectiveness Of E-Training. *International Journal for Quality Research*. DOI:10.2139/ssrn.3641922

5. Arnold, Schaufeli, Wilmar & Leiter, Michael & Taris, Toon. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress.* 22. DOI: 10.1080/02678370802393649.

6. Bondarouk, T., Ruel, M.., (2009). "Electronic human resource management: Challenges in the digital era", *The International Journal of Human Resource Management,* Vol. 20 No. 3, pp.505-514. Retrieved from https://doi.org/10.1080/09585190802707235

7. Ball, K.S. (2001). The use of human resource information systems: a survey. *Personnel Review*, 30(6), 677-693. http://dx.doi.org/10.1108/EUM0000000005979

8. Christian, J., Krieger, H., Holzinger, A., & Behringer, R. (2007). Virtual and Mixed Reality Interfaces for e-Training: Examples of Applications in Light Aircraft Maintenance. In: 12th *International Conference Human-Computer Interaction (HCI) International*. Beijing, China. https://doi.org/10.1007/978-3-540-73283-9_58

9. CedarCrestone. (2010*). CedarCrestone 2009–2010 HR Systems Survey White Paper HR Technologies. Service delivery approaches, and metrics 12th annual edition* Retrieved May 5, 2011 from http:/www.cedarcrestone.com/research.php

10. Celaya, T. A. (2015). Cloud-based computing and human resource management performance: a Delphi study (Unpublished doctoral dissertation). *The University of Phoenix*. Retrieved from https://pqdtopen.proquest.com/doc/1761630245.html?FMT=AI

11. Dhamija, P. (2012). E-Recruitment: a Roadmap Towards E-Human Resource Management. *Www.Researchersworld.Com*,III(3(2),33–39. http://www.researchersworld.com/vol3/issue3/vol3_issue3_2/Paper_05.pdf.

12. DeSanctis, Gerardine. 1986. "Human Resource Information Systems: A Current Assessment," *MIS Quarterly*, (10: 1). https://doi.org/10.2307/248875

13. Ensher, E. A., Nielson, T. R., & Grant-Vallone E. (2002). Tales from the Hiring Line: Effects of the Internet and Technology on HR Processes. Organizational Dynamics, 31(3), 224-44. http://dx.doi.org/10.1016/S0090-2616(02)00111-0

14. Espinosa, S. D. J., Luján-mora, S., & Milosz, M. (2010). E-Hrm : Human Resource Management in the E- Economy Introduction : the Influence of Information Technologies (1). https://sergiolujanmora.es/verpdf/103

15. Epstein, S. (2003). Cognitive-experiential self-theory of personality. In T. Millon & M. J. Lerner (Eds.), *Handbook of psychology: Personality and social psychology,* Vol. 5, pp. 159–184). https://doi.org/10.1002/0471264385.wei0507

16. Fisher, C. D. (2010). Happiness at Work. *International Journal of Management Reviews*, 12, 384-412.http://dx.doi.org/10.1111/j.1468-2370.2009.00270.x

17. Ghosh, V., & Tripathi, N. (2018). *Chapter 7 : Cloud Computing & e-HRM*. DOI:10.4324/9781315172729-7

18. Ghazzawi, K., & Accoumeh, A. (2014). Critical Success Factors of the E-Recruitment System. *Journal of Human Resources Management and Labor Studies*, 2(2), 2333– 6404. Available at: http://jhrmls.com/journals/jhrmls/Vol_2_No_2_June_2014/10.pdf.

19. Galanaki, Eleanna. (2002). The Decision to Recruit Online: A Descriptive Study. *Career Development International.* 7.DOI: 10.1108/13620430210431325.

20. Hila, A. A. A., Alhelou, E. M. S., Shobaki, M. M. A., & Naser, S. S. A. (2017). The Impact of Applying the Dimensions of IT Governance in Improving e-training -Case Study of the Ministry of Telecommunications and Information Technology in Gaza Governorates. *International Journal of Engineering and Information Systems*, 1(8). https://www.researchgate.net/publication/320919810_The_Impact_of_Applying_the_Dimensions_of_IT_Governance_in_Improving_e-training_-

21. Jarrar, Y. and Schiuma, G. (2007), "Measuring performance in the public sector: challenges and trends", *Measuring Business Excellence*, Vol. 11 No. 4, pp. 4-8. https://doi.org/10.1108/13683040710837883

22. J., R., Opatha, H. H. D. N. P., & M. D., P. (2017). A Synthesis towards the Construct of Job Performance. *International Business Research*, 10(10), DOI:10.5539/ibr.v10n10p66

23. Mishra, S. (2010). Internal Marketing- A Tool to Harness Employees' Power in Service Organizations in India. *International Journal of Business and Management*, 185-193. **DOI:**10.5539/ijbm.v5n1p185

24. Mathis, R. L., & Jackson, J. H. (2008). Human Resource management (12th ed.). South-Western: Thomson. 592 p.

25. P. Brough and R. Frame. (2004). Predicting police Employee's Performance and turnover intentions: the role of social support and police organizational variables, *New Zealand Journal of Psychology*, vol. 33, no. 1, pp. 8–18. https://www.psychology.org.nz/journal-archive/NZJP-Vol331-2004-2-Brough.pdf

26. R azak, R. A., Yusop, F. D., Perumal, Y., & Chukumaran, S. R. (2015). The Developmental Process of Managing Virtual Training for Teachers. *International Journal of Information and Education Technology,* 5(8). https://doi.org/10.7763/ IJIET.2015.V5.574

27. Renuka Kumar, M. (2017). Cloud Technology and Human Resource Management. *Annual Research Journal of SCMS Pune Annual Research Journal of Symbiosis Centre for Management Studies*, 5(5), 82–91. https://www.scmspune.ac.in/chapter/2017/Chapter6.pdf

28. Rivai, V. (2014). Manajemen Sumber Daya Manusia untuk Perusahaan, Edisi ke 6, PT. Raja Grafindo Persada, Depok, 16956. https://inlislite.uin-suska.ac.id/opac/detail-opac?id=20052

29. RAVISHA, B.; PAKKEERAPPA, P. (2022) E-Performance Management. **Vidyaniketan** *Journal of Management and Research*, [S.l.], p. 87-91, dec. 2015. ISSN 2320-3951. Available at: http://52.172.159.94/index.php/Vjmr/article/view/84598

30. Raulea, Cristina & Raulea, Ciprian. (2010). The impact of electronic communication technology on teamwork. https://dl.acm.org/doi/pdf/10.1145/238857.372761

31. Strohmeier, S. (2007). "Research in e-HRM: Review and Implications", *Human Resource Management Review*, 17, 19-37. Retrieved from https://doi.org/10.1016/j.hrmr.2006.11.002

32. Strohmeier, Stefan. (2009). Concepts of E-HRM consequences: A categorisation, review and suggestion. *The International Journal of Human Resource Management*. 20. 528-543. DOI:10.1080/09585190802707292.

33. Swart, Juani & Kinnie, Nicholas. (2003). Sharing in Knowledge-Intensive Firms. *Human Resource Management Journal.* 13. 60 - 75. DOI: 10.1111/j.1748-8583.2003.tb00091.x.

34. Townsend, A.M., Bennett, J.T. Privacy, technology, and conflict: Emerging issues and action in workplace privacy. *J Labor Res* **24**, 195–205 (2003). https://doi.org/10.1007/BF02701789

35. Voermans, M., Veldhovern, M., (2007). "Attitude towards e-HRM: An empirical study at Philips", *Personnel Review*, Vol. 36 no. 6 pp-887-902. Retrieved from https://doi.org/10.1108/00483480710822418