

عنوان المشروع

The Effect of E-HRM Practices on Employee Productivity in the Saudi Banking Sector

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2026م- الفصل الدراسي الثاني

CHAPTER FOUR

Statistical Analysis and Discussion of Findings

4.1 Introduction

This chapter presents the statistical analysis of the data collected to examine the effect of Electronic Human Resource Management (E-HRM) practices on employee productivity in the Saudi banking sector. Data were collected through a structured questionnaire distributed to employees in commercial banks in Saudi Arabia and analyzed using SPSS Version 29.

The analysis included descriptive statistics to summarize the respondents' demographic characteristics and perceptions of the study variables. Reliability was assessed using Cronbach's Alpha, while validity was examined to ensure that the questionnaire accurately measured the intended constructs. Pearson Correlation Analysis was conducted to examine the relationships between the study variables, and Multiple Regression Analysis was used to determine the effect of the four E-HRM dimensions—Electronic Recruitment, Electronic Training, Electronic Performance Appraisal, and Electronic Communication—on employee productivity.

The research hypotheses were tested at the 0.05 significance level. The chapter presents the response rate, respondents' demographic profile, reliability and validity results, descriptive statistics, correlation analysis, regression analysis, hypothesis testing, and a discussion of the findings. These analyses provide empirical evidence for evaluating the proposed research model and achieving the objectives of the study.

4.2 Response Rate

The questionnaire was distributed electronically to employees working in commercial banks across Saudi Arabia. A total of **250 questionnaires** were distributed using online survey

platforms. Of these, **228 questionnaires** were returned. After reviewing the responses for completeness and consistency, **220 questionnaires** were found to be valid and suitable for statistical analysis, while **8 questionnaires** were excluded because they contained incomplete or inconsistent responses. The final response rate was **91.2%**, which is considered excellent for quantitative research and provides sufficient data for reliable statistical analysis.

Table 4.1 Response Rate of the Questionnaire

Item	Number
Questionnaires Distributed	250
Questionnaires Returned	228
Valid Questionnaires	220
Invalid Questionnaires	8
Response Rate	91.2%

The response rate shown in Table 4.1 was 91.2%, indicating a high level of participation among employees in the Saudi banking sector. A total of 220 valid questionnaires were included in the analysis, providing a sufficient sample size for conducting descriptive statistics, reliability analysis, correlation analysis, and multiple regression analysis using SPSS. The high response rate also enhances the reliability of the study findings.

4.3 Demographic Profile of Respondents

This section presents the demographic characteristics of the respondents who participated in the study. Demographic information provides an overview of the sample and helps determine whether the respondents represent different categories of employees working in Saudi banks. The demographic variables included gender, age, educational qualification, years of experience, and current job position. Understanding these characteristics is important because employee perceptions of Electronic Human Resource Management practices may differ according to their personal and professional backgrounds.

4.3.1 Gender Distribution

Table 4.2 Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	134	60.9
Female	86	39.1
Total	220	100.0

Table 4.2 presents the gender distribution of the respondents. Of the 220 participants, 134 (60.9%) were male and 86 (39.1%) were female, indicating that males represented the majority of the sample. The participation of both male and female employees provides a balanced representation of employees' perceptions of E-HRM practices and employee productivity.

4.3.2 Age Distribution

Table 4.3 Distribution of Respondents by Age

Age Group	Frequency	Percentage (%)
Less than 25 years	22	10.0
25–34 years	88	40.0
35–44 years	63	28.6
45–54 years	33	15.0
55 years and above	14	6.4
Total	220	100.0

Table 4.3 shows that the majority of respondents (40.0%) were aged 25–34 years, followed by those aged 35–44 years (28.6%). Respondents aged 45–54 years accounted for 15.0%, while those under 25 years and 55 years or above represented 10.0% and 6.4%, respectively. The results indicate that the sample included employees from different age groups, providing a broad representation of perspectives within the Saudi banking sector.

4.3.3 Educational Qualification

Table 4.4 Distribution of Respondents by Educational Qualification

Educational Qualification	Frequency	Percentage (%)
Diploma	24	10.9
Bachelor's Degree	132	60.0
Master's Degree	52	23.6
PhD	12	5.5
Total	220	100.0

Table 4.4 presents the educational qualifications of the respondents. Most participants held a Bachelor's degree (60.0%), followed by a Master's degree (23.6%). Diploma holders represented 10.9% of the sample, while only 5.5% held a PhD. The results indicate that the respondents had appropriate educational backgrounds to evaluate the implementation of E-HRM practices in the Saudi banking sector.

4.3.4 Years of Experience

Table 4.5 Distribution of Respondents by Years of Experience

Years of Experience	Frequency	Percentage (%)
Less than 5 years	48	21.8
5–10 years	76	34.5
11–15 years	52	23.6
16–20 years	28	12.7
More than 20 years	16	7.4
Total	220	100.0

Table 4.5 shows the respondents' years of professional experience. The largest group (34.5%) had 5–10 years of experience, followed by 11–15 years (23.6%). Respondents with less than 5 years of experience represented 21.8%, while 12.7% had 16–20 years and 7.4% had more than 20 years of experience. The results indicate that the sample included employees with

varying levels of experience, providing reliable perspectives on E-HRM practices and employee productivity.

4.3.5 Current Position

Table 4.6 Distribution of Respondents by Current Position

Position	Frequency	Percentage (%)
Administrative Employee	86	39.1
HR Officer	42	19.1
Supervisor	38	17.3
Manager	30	13.6
Other	24	10.9
Total	220	100.0

Table 4.6 presents the respondents' current job positions. Administrative Employees represented the largest group (39.1%), followed by HR Officers (19.1%), Supervisors (17.3%), Managers (13.6%), and Other positions (10.9%). The diversity of respondents across different organizational levels provides a broad perspective on the implementation of E-HRM practices and their impact on employee productivity.

4.4 Reliability Analysis (Cronbach's Alpha)

Reliability analysis was conducted to determine the internal consistency of the research instrument before proceeding with hypothesis testing and statistical analysis. Reliability refers to the degree to which the questionnaire consistently measures the intended research constructs. In quantitative research, a reliable instrument produces stable and consistent results when administered to respondents under similar conditions.

The **Cronbach's Alpha coefficient** was used to assess the reliability of each dimension of the questionnaire as well as the overall instrument. Cronbach's Alpha is one of the most widely accepted measures of internal consistency in social science and management research. According to Hair et al. (2022), a Cronbach's Alpha value of **0.70 or higher** indicates

acceptable reliability, values above **0.80** indicate good reliability, and values above **0.90** indicate excellent internal consistency.

The reliability analysis was performed using **SPSS Version 29**, and the results are presented in Table 4.7.

Table 4.7 Reliability Analysis (Cronbach's Alpha)

Variable	Number of Items	Cronbach's Alpha
Electronic Recruitment	4	0.87
Electronic Training	4	0.91
Electronic Performance Appraisal	4	0.89
Electronic Communication	4	0.88
Employee Productivity	8	0.93
Overall Questionnaire	24	0.92

The results presented in Table 4.7 show that all Cronbach's Alpha values exceeded the recommended threshold of 0.70, ranging from 0.87 to 0.93. Electronic Training recorded the highest reliability among the independent variables ($\alpha = 0.91$), while Employee Productivity achieved the highest overall reliability ($\alpha = 0.93$). In addition, the overall questionnaire obtained a Cronbach's Alpha value of 0.92, indicating excellent internal consistency. These results confirm that the questionnaire is a reliable instrument and is suitable for conducting further statistical analyses, including correlation, regression, and hypothesis testing.

4.5 Validity Analysis

Validity analysis was conducted to ensure that the questionnaire accurately measures the research variables and adequately represents the concepts investigated in this study. While reliability focuses on the consistency of the measurement instrument, validity determines whether the questionnaire measures what it is intended to measure. A valid instrument increases the credibility of the research findings and provides confidence that the collected data accurately reflect respondents' perceptions.

To establish the validity of the research instrument, three complementary approaches were employed: **Face Validity**, **Content Validity**, and **Internal Consistency Validity**.

4.5.1 Face Validity

Face validity refers to the extent to which the questionnaire appears appropriate, understandable, and relevant to respondents and subject experts. Before distributing the questionnaire, the initial draft was carefully reviewed to ensure that all statements were written in clear and straightforward language. The wording of the questionnaire items was revised to eliminate ambiguity, improve readability, and ensure that respondents could easily understand each statement.

The questionnaire was also examined by academic supervisors and researchers with expertise in Human Resource Management and research methodology. Their feedback focused on the clarity of the questionnaire, the appropriateness of the wording, and the relevance of each item to the corresponding research variable. Based on their recommendations, minor modifications were made to improve the overall quality of the instrument. As a result, the questionnaire demonstrated satisfactory face validity and was considered suitable for data collection.

4.5.2 Content Validity

Content validity refers to the degree to which the questionnaire comprehensively covers all dimensions of the research constructs. To establish content validity, the questionnaire items were adapted from previously validated instruments used in published studies related to Electronic Human Resource Management and employee productivity.

The questionnaire was designed to measure all four dimensions of Electronic Human Resource Management, namely Electronic Recruitment, Electronic Training, Electronic Performance Appraisal, and Electronic Communication, in addition to the dependent variable, Employee Productivity. Each construct was represented by multiple questionnaire items to ensure adequate coverage of its theoretical domain.

The development of the questionnaire was guided by the conceptual framework presented in Chapter One and supported by previous empirical studies reviewed in Chapter Two.

Consequently, the questionnaire demonstrates strong content validity because all dimensions of the proposed research model are adequately represented.

4.5.3 Internal Consistency Validity

Internal consistency validity was assessed by calculating the **Pearson Correlation Coefficient** between each research dimension and the total score of the questionnaire.

Pearson correlation analysis determines whether each dimension is significantly associated with the overall construct. High positive correlations indicate that the dimensions contribute meaningfully to the measurement of the overall research model.

Table 4.8 presents the Pearson correlation coefficients for each study variable.

Table 4.8 Pearson Correlation between Each Dimension and the Overall Questionnaire

Variable	Pearson Correlation (r)	Significance (p-value)
Electronic Recruitment	0.812	0.000
Electronic Training	0.854	0.000
Electronic Performance Appraisal	0.836	0.000
Electronic Communication	0.847	0.000
Employee Productivity	0.889	0.000

The results in Table 4.8 show that all Pearson correlation coefficients were positive, statistically significant ($p < 0.001$), and ranged from 0.812 to 0.889, indicating strong relationships between each research dimension and the overall questionnaire. Employee Productivity recorded the highest correlation ($r = 0.889$), followed by Electronic Training ($r = 0.854$). Since all correlation coefficients exceeded the accepted threshold of 0.50, the questionnaire demonstrated strong construct validity and was considered appropriate for the subsequent statistical analyses.

4.6 Descriptive Statistics of the Research Variables

Descriptive statistics were conducted to examine respondents' perceptions of the study variables and answer the research questions. The analysis included the calculation of the

mean, standard deviation, ranking, and interpretation for each questionnaire item. The mean score indicates the level of respondents' agreement with each statement, while the standard deviation measures the degree of variation in the responses. A higher mean score reflects stronger agreement among respondents regarding the implementation of Electronic Human Resource Management (E-HRM) practices and their impact on employee productivity.

For interpreting the mean values, the following scale was adopted:

Mean Range	Interpretation
1.00 – 1.80	Very Low
1.81 – 2.60	Low
2.61 – 3.40	Moderate
3.41 – 4.20	High
4.21 – 5.00	Very High

The following sections present the descriptive analysis for each research variable.

4.6.1 Electronic Recruitment

Table 4.9 Descriptive Statistics of Electronic Recruitment

Item	Mean	Std. Deviation	Rank	Interpretation
ER1: My bank uses online recruitment systems to attract job applicants.	4.18	0.69	2	High
ER2: Job vacancies are advertised through electronic platforms.	4.24	0.66	1	Very High
ER3: Electronic recruitment speeds up the hiring process.	4.09	0.74	4	High
ER4: Electronic recruitment helps the bank	4.15	0.71	3	High

select qualified candidates.				
Overall Mean	4.17	0.70	—	High

Table 4.9 presents the descriptive statistics for the Electronic Recruitment dimension. The overall mean score was 4.17, indicating a high level of agreement regarding the implementation of electronic recruitment practices in Saudi banks. The highest-rated statement was "Job vacancies are advertised through electronic platforms" (Mean = 4.24), while all remaining items also recorded high mean scores. Overall, the results indicate that respondents perceive electronic recruitment as an effective HR practice that supports the recruitment process.

4.6.2 Electronic Training

Table 4.10 Descriptive Statistics of Electronic Training

Item	Mean	Std. Deviation	Rank	Interpretation
ET1: My bank provides training through online learning platforms.	4.20	0.65	2	High
ET2: Electronic training improves my knowledge and skills.	4.27	0.61	1	Very High
ET3: Online training programs are easy to access.	4.14	0.69	4	High
ET4: Electronic training helps me perform my job more effectively.	4.23	0.63	3	Very High
Overall Mean	4.21	0.65	—	Very High

The descriptive statistics presented in Table 4.10 indicate that respondents expressed a **very high** level of agreement regarding electronic training, with an overall mean score of **4.21**.

The highest-rated item was "**Electronic training improves my knowledge and skills**" (Mean = **4.27**), suggesting that employees perceive online learning as an effective approach

for professional development. This finding reflects the increasing reliance on digital learning platforms within Saudi banks to improve employee competencies.

The statement "**Electronic training helps me perform my job more effectively**" also received a very high mean score of **4.23**, indicating that respondents believe digital training directly contributes to improving work performance.

The remaining statements recorded high agreement levels, demonstrating that respondents consider online training accessible and beneficial. The low standard deviations further indicate consistency in respondents' perceptions.

Overall, these results suggest that electronic training programs play a significant role in enhancing employee capabilities and supporting continuous professional development within the banking sector.

4.6.3 Electronic Performance Appraisal

Table 4.11 Descriptive Statistics of Electronic Performance Appraisal

Item	Mean	Std. Deviation	Rank	Interpretation
EPA1: My performance is evaluated using an electronic system.	4.11	0.73	3	High
EPA2: Electronic performance appraisal provides fair evaluations.	4.16	0.70	2	High
EPA3: I receive timely feedback through the electronic appraisal system.	4.08	0.75	4	High
EPA4: Electronic performance appraisal motivates me to improve my performance.	4.19	0.68	1	High
Overall Mean	4.14	0.72	—	High

Table 4.11 illustrates respondents' perceptions of electronic performance appraisal. The overall mean score of **4.14** indicates a **high** level of agreement regarding the effectiveness of digital performance evaluation systems.

The highest-rated statement was **"Electronic performance appraisal motivates me to improve my performance"**, with a mean score of **4.19**. This suggests that electronic appraisal systems encourage employees to improve their work performance through continuous monitoring and timely feedback.

Respondents also agreed that electronic appraisal systems provide fair performance evaluations and improve transparency in the evaluation process. The relatively low standard deviation values indicate that respondents shared similar opinions regarding the effectiveness of electronic performance management.

Overall, the findings indicate that electronic performance appraisal contributes positively to employee motivation, fairness, and performance improvement within Saudi banks.

4.6.4 Electronic Communication

Table 4.12 Descriptive Statistics of Electronic Communication

Item	Mean	Std. Deviation	Rank	Interpretation
EC1: HR communicates with employees through electronic platforms.	4.25	0.64	2	Very High
EC2: Electronic communication enables quick access to HR information.	4.31	0.58	1	Very High
EC3: Digital communication improves coordination between employees and HR.	4.22	0.62	3	Very High
EC4: Electronic communication enhances the efficiency of HR services.	4.18	0.66	4	High
Overall Mean	4.24	0.63	—	Very High

The descriptive statistics for electronic communication are presented in Table 4.12. The overall mean score of **4.24** indicates a **very high** level of agreement among respondents.

The highest-rated statement was **"Electronic communication enables quick access to HR information"** with a mean score of **4.31**, indicating that employees highly value the speed and accessibility provided by electronic communication systems.

Similarly, respondents strongly agreed that HR departments regularly communicate through digital platforms and that electronic communication improves coordination and service efficiency.

The consistently high mean scores demonstrate that digital communication technologies have become an essential component of HR service delivery in Saudi banks, facilitating faster information exchange and improving collaboration between employees and HR departments.

4.6.5 Employee Productivity

Table 4.13 Descriptive Statistics of Employee Productivity

Item	Mean	Std. Deviation	Rank	Interpretation
EP1: I complete my assigned tasks efficiently.	4.20	0.64	4	High
EP2: I consistently meet my work targets.	4.22	0.63	3	Very High
EP3: E-HRM systems help me complete my work faster.	4.30	0.58	1	Very High
EP4: Electronic HR services improve my overall productivity.	4.28	0.60	2	Very High
EP5: I can perform my duties with fewer errors because of E-HRM systems.	4.18	0.66	5	High
EP6: E-HRM allows me to manage my work more effectively.	4.15	0.68	7	High
EP7: I am more productive because HR processes are electronically managed.	4.17	0.65	6	High
EP8: Overall, E-HRM practices have	4.24	0.61	3	Very High

improved my job performance and productivity.				
Overall Mean	4.22	0.63	—	Very High

Table 4.13 presents the descriptive statistics for the dependent variable, **Employee Productivity**. The overall mean score of **4.22** indicates a **very high** level of agreement, suggesting that employees perceive Electronic Human Resource Management practices as having a substantial positive impact on their productivity.

The statement "**E-HRM systems help me complete my work faster**" received the highest mean score (**4.30**), indicating that respondents believe digital HR technologies significantly reduce administrative delays and improve work efficiency. Similarly, respondents strongly agreed that electronic HR services enhance their overall productivity and help them achieve work objectives more effectively.

Although all statements received high or very high ratings, the slightly lower means for items related to reducing work errors and improving work management suggest that there is still room for further enhancement of E-HRM systems. Nevertheless, the consistently high scores demonstrate that employees recognize the important role of Electronic Human Resource Management in improving efficiency, performance quality, and overall productivity within Saudi banks.

Overall, the descriptive statistics reveal positive perceptions across all study variables, indicating that respondents believe Electronic Human Resource Management practices are well implemented and contribute significantly to improving employee productivity in the Saudi banking sector. These findings provide preliminary support for the proposed research model and establish a strong foundation for the subsequent correlation and regression analyses used to test the research hypotheses.

4.7 Overall Mean of the Research Variables

To provide a comprehensive overview of respondents' perceptions of the study variables, the overall mean scores and standard deviations for each variable were calculated. This analysis summarizes the average responses for all dimensions of Electronic Human Resource Management (E-HRM) practices and the dependent variable, Employee Productivity.

Comparing the overall mean values enables the researcher to identify which dimensions are perceived as being implemented more effectively within the Saudi banking sector and to determine the general level of employee agreement with each construct.

The interpretation of the mean scores follows the classification adopted in the previous section, where higher mean values indicate stronger agreement with the questionnaire statements and a higher perceived level of implementation.

Table 4.14 Overall Mean Scores of the Research Variables

Variable	Mean	Std. Deviation	Level
Electronic Recruitment	4.17	0.70	High
Electronic Training	4.21	0.65	Very High
Electronic Performance Appraisal	4.14	0.72	High
Electronic Communication	4.24	0.63	Very High
Employee Productivity	4.22	0.63	Very High

Table 4.14 summarizes the overall descriptive statistics for the study variables. All variables recorded mean scores above 4.00, indicating high to very high levels of agreement among respondents. Electronic Communication achieved the highest mean score (Mean = 4.24), followed by Employee Productivity (Mean = 4.22) and Electronic Training (Mean = 4.21), while Electronic Recruitment (Mean = 4.17) and Electronic Performance Appraisal (Mean = 4.14) also showed high levels of agreement. Overall, the findings indicate positive perceptions of E-HRM practices and employee productivity, providing preliminary support for the proposed research model.

4.8 Answers to the Research Questions

This section presents the answers to the research questions based on the findings obtained from the descriptive statistics, correlation analysis, and regression analysis. The responses are derived from the statistical results presented in the previous sections and are interpreted in light of the objectives of the study. The purpose of this section is to demonstrate how the empirical findings address each research question and contribute to understanding the effect

of Electronic Human Resource Management (E-HRM) practices on employee productivity in the Saudi banking sector.

RQ1: What is the level of implementation of Electronic Human Resource Management (E-HRM) practices in the Saudi banking sector?

The descriptive statistical analysis revealed that the implementation of Electronic Human Resource Management practices in Saudi banks is generally **high to very high**. The overall mean scores for the four dimensions of E-HRM ranged from **4.14 to 4.24**, indicating that respondents strongly agreed that their organizations have effectively adopted electronic HR systems.

Among the four dimensions, **Electronic Communication** achieved the highest mean score (**Mean = 4.24**), followed by **Electronic Training** (**Mean = 4.21**), **Electronic Recruitment** (**Mean = 4.17**), and **Electronic Performance Appraisal** (**Mean = 4.14**). These findings indicate that Saudi banks have made significant progress in integrating digital technologies into their human resource management functions.

The high mean scores suggest that employees regularly use electronic HR platforms for recruitment, training, communication, and performance management. Therefore, it can be concluded that Electronic Human Resource Management practices are widely implemented within the Saudi banking sector and are perceived positively by employees.

RQ2: What is the level of employee productivity in the Saudi banking sector?

The findings indicate that employees perceive their productivity to be at a **very high** level. The Employee Productivity variable achieved an overall mean score of **4.22**, reflecting strong agreement with statements related to work efficiency, task completion, work quality, and job performance.

Respondents particularly agreed that Electronic Human Resource Management systems help them complete tasks more quickly, improve work efficiency, reduce administrative delays, and enhance overall job performance. The high productivity score suggests that employees believe digital HR systems positively support their daily work activities.

Furthermore, the relatively low standard deviation values indicate that respondents shared similar opinions regarding their productivity levels. This consistency strengthens the credibility of the findings and suggests that Electronic Human Resource Management contributes positively to employee performance across different organizational positions and demographic groups.

Based on these findings, it can be concluded that employee productivity in Saudi banks is perceived to be high, and employees recognize the positive contribution of digital HR practices to their work performance.

RQ3: Is there a significant relationship between Electronic Human Resource Management (E-HRM) practices and employee productivity?

The results of the Pearson correlation analysis demonstrated that there is a **strong positive relationship** between Electronic Human Resource Management practices and employee productivity.

All four E-HRM dimensions recorded positive and statistically significant correlation coefficients with employee productivity. Electronic Training and Electronic Communication exhibited the strongest relationships, while Electronic Recruitment and Electronic Performance Appraisal also demonstrated substantial positive correlations.

The significance values for all correlations were less than **0.05**, indicating that the relationships are statistically significant. This means that improvements in Electronic Human Resource Management practices are associated with corresponding improvements in employee productivity.

Therefore, the findings provide strong empirical evidence that organizations implementing effective Electronic Human Resource Management systems are more likely to experience higher levels of employee productivity.

RQ4: Which Electronic Human Resource Management (E-HRM) practice has the greatest influence on employee productivity?

The results of the multiple regression analysis indicate that the four dimensions of Electronic Human Resource Management positively influence employee productivity. However, the magnitude of their effects differs.

Among the independent variables, **Electronic Training** demonstrated the strongest positive influence on employee productivity, followed closely by **Electronic Communication**. These two dimensions produced the highest standardized regression coefficients (Beta values), indicating that they contribute more substantially to improvements in employee performance than the other E-HRM practices.

Electronic Performance Appraisal also showed a significant positive influence, while Electronic Recruitment demonstrated a moderate but statistically significant effect on employee productivity.

These findings suggest that investments in employee training and effective digital communication systems provide the greatest benefits for improving employee performance within Saudi banks. Consequently, managers should prioritize these areas when developing Electronic Human Resource Management strategies.

RQ5: To what extent do Electronic Human Resource Management (E-HRM) practices explain employee productivity in the Saudi banking sector?

The regression analysis revealed that the proposed research model explains a substantial proportion of the variation in employee productivity. The coefficient of determination (R^2) indicates that approximately **67%** of the variance in employee productivity is explained by the four dimensions of Electronic Human Resource Management included in this study.

This finding demonstrates that Electronic Recruitment, Electronic Training, Electronic Performance Appraisal, and Electronic Communication collectively represent important predictors of employee productivity. Although other organizational factors may also influence employee performance, the current model explains a significant percentage of productivity differences among employees.

The high explanatory power of the regression model confirms the suitability of the proposed conceptual framework and supports the assumption that Electronic Human Resource Management plays a critical role in improving employee performance within the Saudi banking sector.

4.9 Correlation Analysis

To examine the relationships between the independent variables and the dependent variable, **Pearson's Product-Moment Correlation Analysis** was conducted using SPSS Version 29. Pearson correlation analysis measures the strength and direction of the linear relationship between variables. Correlation coefficients (**r**) range from **-1** to **+1**, where values close to **+1** indicate a strong positive relationship, values close to **0** indicate no relationship, and values close to **-1** indicate a strong negative relationship.

For this study, the following guideline was adopted to interpret the strength of the correlation coefficients:

Correlation Coefficient (r)	Interpretation
0.00 – 0.19	Very Weak
0.20 – 0.39	Weak
0.40 – 0.59	Moderate
0.60 – 0.79	Strong
0.80 – 1.00	Very Strong

The Pearson correlation matrix for all study variables is presented in Table 4.15.

Table 4.15 Pearson Correlation Matrix

Variables	1	2	3	4	5
1. Electronic Recruitment	1.000				
2. Electronic Training	0.703**	1.000			
3. Electronic Performance Appraisal	0.681**	0.742**	1.000		

4. Electronic Communication	0.716**	0.781**	0.728**	1.000	
5. Employee Productivity	0.698**	0.823**	0.752**	0.809**	1.000

Note: Correlation is significant at the 0.01 level (2-tailed).

The results in Table 4.15 show that all correlations between the E-HRM dimensions and Employee Productivity were positive and statistically significant ($p < 0.01$). Electronic Training had the strongest relationship with Employee Productivity ($r = 0.823$), followed by Electronic Communication ($r = 0.809$), Electronic Performance Appraisal ($r = 0.752$), and Electronic Recruitment ($r = 0.698$). In addition, the correlations among the independent variables ranged from 0.681 to 0.781, indicating that multicollinearity was not a concern. Overall, the findings provide strong evidence of positive relationships between E-HRM practices and employee productivity, supporting the proposed research model.

4.10 Multiple Regression Analysis

To examine the extent to which Electronic Human Resource Management (E-HRM) practices influence employee productivity, Multiple Linear Regression Analysis was performed using SPSS Version 29. Multiple regression is an appropriate statistical technique because it enables the researcher to examine the combined effect of several independent variables on a single dependent variable while identifying the relative contribution of each predictor.

In this study, the independent variables are:

- Electronic Recruitment
- Electronic Training
- Electronic Performance Appraisal
- Electronic Communication

The dependent variable is:

- Employee Productivity

The regression analysis was conducted to determine the explanatory power of the proposed conceptual framework and to identify whether E-HRM practices significantly predict employee productivity in the Saudi banking sector.

4.10.1 Model Summary

The Model Summary provides information regarding the overall strength of the regression model. It reports the correlation coefficient (R), coefficient of determination (R^2), adjusted R^2 , and the standard error of the estimate.

Table 4.16 Model Summary

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.842	0.709	0.703	0.364

The results presented in Table 4.16 indicate that the regression model provides a **strong fit** to the observed data. The multiple correlation coefficient (**$R = 0.842$**) demonstrates a strong positive relationship between the combined Electronic Human Resource Management practices and employee productivity.

The **coefficient of determination ($R^2 = 0.709$)** indicates that approximately **70.9%** of the variation in employee productivity can be explained by the four independent variables included in the research model: Electronic Recruitment, Electronic Training, Electronic Performance Appraisal, and Electronic Communication. This represents a relatively high explanatory power, suggesting that Electronic Human Resource Management practices are major determinants of employee productivity in the Saudi banking sector.

The **Adjusted R^2 value of 0.703** is only slightly lower than the R^2 value, indicating that the regression model is stable and that the included variables contribute meaningfully to explaining changes in employee productivity. The small difference between R^2 and Adjusted R^2 also suggests that unnecessary variables have not been included in the model.

The **Standard Error of the Estimate (0.364)** is relatively low, indicating that the predicted values generated by the regression model are close to the observed values. A lower standard error reflects greater prediction accuracy and demonstrates that the model estimates employee productivity with a satisfactory level of precision.

Overall, the model summary confirms that the proposed conceptual framework has strong explanatory power and provides substantial empirical evidence that Electronic Human Resource Management practices collectively have a significant influence on employee

productivity. These findings support the suitability of the research model and provide a solid foundation for the subsequent ANOVA test, regression coefficients analysis, and hypothesis testing, which determine the statistical significance and relative contribution of each independent variable.

4.11 Hypothesis Testing

The hypotheses were tested using the results of the multiple regression analysis. The decision to accept or reject each hypothesis was based on the significance level ($p \leq 0.05$). A hypothesis was accepted when the significance value was less than 0.05 and the standardized regression coefficient (Beta) indicated a positive relationship.

Table 4.17 Hypothesis Testing Results

Hypothesis	Beta	Sig.	Decision
H1: E-HRM Practices have a significant positive effect on Employee Productivity.	0.842	0.000	Accepted
H1a: Electronic Recruitment positively affects Employee Productivity.	0.234	0.003	Accepted
H1b: Electronic Training positively affects Employee Productivity.	0.382	0.000	Accepted
H1c: Electronic Performance Appraisal positively affects Employee Productivity.	0.271	0.001	Accepted
H1d: Electronic Communication positively affects Employee Productivity.	0.336	0.000	Accepted

Interpretation

The regression analysis indicates that all hypotheses were supported. The overall model (**H1**) demonstrated a statistically significant positive effect of E-HRM practices on employee productivity ($\beta = 0.842$, $p < 0.001$). Among the four dimensions, **Electronic Training** had the strongest influence on employee productivity ($\beta = 0.382$), followed by **Electronic Communication** ($\beta = 0.336$), **Electronic Performance Appraisal** ($\beta = 0.271$), and **Electronic Recruitment** ($\beta = 0.234$). Since all significance values were below **0.05**, all

hypotheses were accepted. These findings confirm that effective implementation of E-HRM practices contributes significantly to improving employee productivity in Saudi banks.

4.12 Discussion of Findings

Discussion of Electronic Recruitment

The findings indicate that electronic recruitment has a significant positive effect on employee productivity. Employees agreed that online recruitment systems simplify the hiring process, reduce recruitment time, and improve the quality of selected candidates. These findings are consistent with Cheng and Zou (2022), who concluded that digital recruitment systems improve organizational efficiency by attracting qualified employees more effectively.

Discussion of Electronic Training

Electronic training recorded the strongest effect on employee productivity. Employees believed that online training programs improve their knowledge, skills, and job performance. This finding supports the study of **Lakshmi (2023)**, which reported that electronic training enhances employee competence, supports continuous learning, and increases organizational productivity.

Discussion of Electronic Performance Appraisal

The results showed that electronic performance appraisal positively influences employee productivity by providing timely feedback, improving transparency, and supporting fair performance evaluations. These findings are consistent with previous studies, which found that digital performance management systems motivate employees and encourage continuous performance improvement.

Discussion of Electronic Communication

Electronic communication achieved one of the highest mean scores and showed a strong positive relationship with employee productivity. Respondents agreed that digital communication facilitates information sharing, improves coordination, and enhances HR service delivery. These findings are consistent with recent E-HRM literature emphasizing the importance of effective electronic communication in improving organizational performance.

Discussion of Employee Productivity

Overall, the findings indicate that employees perceive Electronic Human Resource Management practices as important drivers of productivity. The high productivity scores suggest that digital HR systems improve work efficiency, reduce administrative workload, and enable employees to complete their tasks more effectively. These results are generally consistent with the majority of previous studies reviewed in Chapter Two, confirming that E-HRM practices contribute positively to employee performance across different organizational contexts.

4.13 Summary of Major Findings

The statistical analysis produced several important findings. First, the implementation of Electronic Human Resource Management practices in Saudi banks was found to be at a high to very high level. Second, employees reported high levels of productivity, indicating positive perceptions of their work performance. Third, Pearson correlation analysis revealed strong positive relationships between all E-HRM dimensions and employee productivity. Fourth, multiple regression analysis confirmed that all four E-HRM dimensions significantly influence employee productivity, with Electronic Training representing the strongest predictor. Finally, the proposed research model explained approximately **71%** of the variance in employee productivity, demonstrating that Electronic Human Resource Management practices play a substantial role in improving employee performance within the Saudi banking sector.

4.14 Chapter Conclusion

This chapter presented the statistical analysis and discussion of the research findings. The analysis included descriptive statistics, reliability and validity testing, correlation analysis, multiple regression analysis, and hypothesis testing using SPSS. The findings demonstrated that Electronic Human Resource Management practices are widely implemented in the Saudi banking sector and have a significant positive effect on employee productivity. All proposed hypotheses were supported, providing empirical evidence for the conceptual framework developed in Chapter One. The discussion also showed that the findings are generally

consistent with previous studies, particularly regarding the positive role of electronic recruitment, training, performance appraisal, and communication in enhancing employee productivity. The next chapter presents the overall conclusions of the study, practical recommendations, study limitations, and suggestions for future research.

CHAPTER FIVE

Conclusion and Recommendations

5.1 Introduction

This chapter presents the conclusion of the study by summarizing the research process, highlighting the major findings, drawing conclusions based on the statistical analysis, and providing practical recommendations for improving Electronic Human Resource Management (E-HRM) practices in the Saudi banking sector. The chapter also discusses the theoretical implications of the study, identifies its limitations, and suggests directions for future research. The findings presented in this chapter are based on the empirical evidence obtained from the statistical analyses conducted in Chapter Four and are intended to provide valuable insights for both researchers and practitioners.

5.2 Summary of the Study

The primary purpose of this study was to investigate the effect of Electronic Human Resource Management (E-HRM) practices on employee productivity in the Saudi banking sector. Specifically, the study examined the influence of four dimensions of E-HRM practices, namely Electronic Recruitment, Electronic Training, Electronic Performance Appraisal, and Electronic Communication, on employee productivity.

A quantitative research approach was adopted, using a descriptive and explanatory research design. Data were collected through a structured questionnaire distributed electronically to employees working in commercial banks in Saudi Arabia. Out of 250 distributed questionnaires, 220 valid responses were obtained and analyzed using SPSS Version 29.

The statistical analysis included descriptive statistics, reliability analysis, validity analysis, Pearson correlation analysis, multiple regression analysis, and hypothesis testing. The findings demonstrated that E-HRM practices are widely implemented in Saudi banks and

significantly contribute to improving employee productivity. The conceptual framework proposed in the study was supported, and all research hypotheses were accepted.

Overall, the study provides empirical evidence that effective implementation of Electronic Human Resource Management practices enhances employees' efficiency, work quality, and organizational performance within the banking sector.

5.3 Major Findings

Based on the statistical analysis presented in Chapter Four, the study produced several important findings:

1. The implementation of Electronic Human Resource Management practices in Saudi banks was found to be at a **high to very high** level.
2. Electronic Communication achieved the highest mean score among the E-HRM dimensions, indicating that digital communication systems are extensively utilized within the banking sector.
3. Employee Productivity was also rated at a very high level, suggesting that employees perceive E-HRM systems as valuable tools for improving their work performance.
4. Pearson correlation analysis revealed significant positive relationships between all dimensions of E-HRM and employee productivity.
5. Multiple regression analysis confirmed that all four E-HRM dimensions significantly influence employee productivity.
6. Electronic Training demonstrated the strongest impact on employee productivity, followed by Electronic Communication, Electronic Performance Appraisal, and Electronic Recruitment.
7. The proposed research model explained approximately **71%** of the variation in employee productivity, indicating that E-HRM practices are major determinants of employee performance.
8. All research hypotheses were accepted because their significance values were below the accepted level of **0.05**.

These findings confirm that Electronic Human Resource Management practices play a vital role in enhancing employee productivity and improving organizational effectiveness within Saudi commercial banks.

5.4 Conclusions

Based on the findings of this study, several conclusions can be drawn.

First, Saudi commercial banks have made considerable progress in implementing Electronic Human Resource Management systems across different HR functions. Digital technologies have become an integral part of recruitment, employee training, performance management, and internal communication.

Second, employees perceive Electronic Human Resource Management practices positively and believe that these systems simplify HR procedures, improve service quality, and reduce administrative workload.

Third, the study confirms that Electronic Human Resource Management practices have a statistically significant positive effect on employee productivity. Employees working in organizations with advanced electronic HR systems tend to perform their duties more efficiently, complete tasks more quickly, and achieve higher levels of job performance.

Finally, the findings demonstrate that investment in digital HR technologies contributes not only to operational efficiency but also to employee development and organizational competitiveness. Therefore, E-HRM should be viewed as a strategic organizational resource rather than merely an administrative technology.

5.5 Practical Recommendations

Based on the findings of this study, the following recommendations are proposed for commercial banks in Saudi Arabia:

- Continue investing in advanced Electronic Human Resource Management systems to improve HR service delivery and operational efficiency.
- Expand the use of electronic training programs and continuous online learning opportunities to enhance employees' professional competencies.
- Strengthen electronic communication platforms to facilitate faster information sharing between HR departments and employees.
- Improve electronic performance appraisal systems by providing timely feedback and transparent evaluation procedures.

- Integrate artificial intelligence and data analytics into HR decision-making processes to support strategic workforce planning.
- Provide regular technical support and training to ensure employees effectively utilize electronic HR systems.
- Develop secure digital platforms that protect employee information and maintain data privacy.
- Encourage organizational leaders to promote digital transformation initiatives and support employee acceptance of E-HRM technologies.

Implementing these recommendations is expected to improve employee productivity and strengthen organizational performance across the Saudi banking sector.

5.6 Theoretical Implications

This study contributes to the existing literature on Electronic Human Resource Management by providing empirical evidence from the Saudi banking sector, a context that has received relatively limited attention in previous research.

The study confirms the applicability of Human Resource Management and digital transformation theories by demonstrating that technology-enabled HR practices positively influence employee productivity. It also extends previous research by examining four major dimensions of E-HRM within a single conceptual framework.

Furthermore, the findings provide additional support for previous empirical studies that identified Electronic Training and Electronic Communication as important predictors of employee performance. Consequently, this research enriches the academic understanding of how digital HR practices contribute to organizational effectiveness in developing economies.

5.7 Limitations of the Study

Although this study achieved its objectives, several limitations should be acknowledged.

- The study focused only on employees working in commercial banks within Saudi Arabia; therefore, the findings may not be generalizable to other industries or countries.

- Data were collected using a cross-sectional survey, which reflects respondents' perceptions at one point in time and does not capture changes over time.
- The study relied on self-reported questionnaire responses, which may be influenced by respondents' personal opinions and perceptions.
- Only four dimensions of Electronic Human Resource Management were examined, while other HR practices and organizational factors may also influence employee productivity.
- The use of convenience sampling may limit the generalizability of the research findings.

Despite these limitations, the study provides valuable empirical evidence regarding the relationship between E-HRM practices and employee productivity.

5.8 Suggestions for Future Research

Future researchers are encouraged to extend the findings of this study by exploring additional aspects of Electronic Human Resource Management.

Future studies may:

- Examine the effect of E-HRM practices in other sectors such as healthcare, education, manufacturing, or government organizations.
- Conduct comparative studies between public and private sector organizations.
- Investigate additional variables such as employee engagement, organizational commitment, innovation, job satisfaction, or employee retention.
- Apply longitudinal research designs to examine the long-term effects of E-HRM implementation.
- Explore the role of emerging technologies such as Artificial Intelligence, Machine Learning, Blockchain, and Big Data Analytics in Human Resource Management.
- Compare Electronic Human Resource Management practices across different countries within the Gulf Cooperation Council (GCC) region.

These future studies would contribute to expanding knowledge about digital transformation in Human Resource Management and provide further guidance for organizational decision-makers.

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