

عنوان المشروع

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

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CHAPTER ONE

1. Research Background

Electronic Human Resource Management (E-HRM) has become one of the most significant technological developments in modern organizations. It refers to the use of digital technologies, internet-based applications, and information systems to perform traditional human resource management (HRM) functions more efficiently. These functions include recruitment, employee training and development, performance appraisal, communication, payroll, and employee records management. By integrating technology into HR activities, organizations can reduce administrative workload, improve decision-making, and enhance overall organizational performance (Creswell, 2023).

The banking sector is among the industries that have rapidly adopted digital technologies to improve operational efficiency and customer service. In Saudi Arabia, banks are actively investing in digital transformation initiatives in line with the objectives of Saudi Vision 2030. As financial institutions continue to modernize their operations, Human Resource (HR) departments are increasingly implementing E-HRM systems to streamline HR processes, improve employee experiences, and support organizational competitiveness.

Employee productivity is a critical factor that determines the success and sustainability of banks. Productive employees contribute to higher service quality, faster transaction processing, greater customer satisfaction, and improved organizational performance. E-HRM practices such as electronic recruitment, online training, digital performance appraisal, and electronic communication can positively influence employees by providing timely information, continuous learning opportunities, transparent evaluation systems, and efficient communication channels (Bondarouk, 2016).

Despite the growing implementation of E-HRM systems in Saudi banks, there is still limited empirical evidence regarding how these practices affect employee productivity. While many studies have examined E-HRM in different countries and industries, relatively few have focused specifically on the Saudi banking sector. Therefore, this study aims to investigate the effect of E-HRM practices on employee productivity among employees working in Saudi banks.

2. Research Problem

The Saudi banking sector has experienced rapid digital transformation over the past decade. Banks have invested significantly in information technology and electronic human resource management systems to improve operational efficiency and employee performance. However, implementing advanced HR technologies does not necessarily guarantee higher employee productivity. Some employees may face challenges such as inadequate training, resistance to technological change, limited technical skills, or insufficient organizational support, which may reduce the effectiveness of E-HRM systems.

Although Saudi banks continue to adopt electronic HR practices, there is still uncertainty regarding the extent to which these practices improve employee productivity. Previous studies have reported inconsistent findings concerning the relationship between E-HRM and employee outcomes, particularly in developing economies. Consequently, there is a need for further research that examines how different E-HRM practices contribute to employee productivity within the Saudi banking environment (Marler, 2016).

This study seeks to address this gap by investigating the effect of four major E-HRM practices electronic recruitment, electronic training, electronic performance appraisal, and electronic communication on employee productivity in the Saudi banking sector.

3. Research Importance

This research is important from both theoretical and practical perspectives.

Theoretical Importance

The study contributes to the growing body of knowledge on electronic human resource management by examining its relationship with employee productivity within the Saudi banking sector. It also extends previous literature by focusing on four important E-HRM dimensions and providing empirical evidence from Saudi Arabia, where research on this topic remains limited.

Practical Importance

The findings of this study will assist bank managers and HR professionals in understanding the effectiveness of E-HRM practices in improving employee productivity. The results may help organizations identify which HR technologies create the greatest value and support informed decisions regarding future investments in digital HR systems (Stone, 2015).

The study may also provide useful recommendations for policymakers, banking executives, and HR practitioners who seek to enhance workforce productivity while supporting Saudi Vision 2030's digital transformation objectives.

4. Research Questions

This study seeks to answer the following research questions:

Main Research Question

- What is the effect of Electronic Human Resource Management (E-HRM) practices on employee productivity in the Saudi banking sector?

Sub-Questions

1. What is the effect of electronic recruitment on employee productivity?
2. What is the effect of electronic training on employee productivity?
3. What is the effect of electronic performance appraisal on employee productivity?
4. What is the effect of electronic communication on employee productivity?
5. Which E-HRM practice has the greatest influence on employee productivity?

5. Research Objectives

The main objective of this study is to investigate the effect of Electronic Human Resource Management practices on employee productivity in the Saudi banking sector.

The specific objectives are to:

- Examine the effect of electronic recruitment on employee productivity.
- Investigate the influence of electronic training on employee productivity.
- Evaluate the impact of electronic performance appraisal on employee productivity.
- Assess the effect of electronic communication on employee productivity.
- Identify the most influential E-HRM practice affecting employee productivity.
- Provide recommendations for improving HR digitalization within Saudi banks.

6. Research Hypotheses

The study proposes the following hypotheses:

Main Hypothesis

H1: Electronic Human Resource Management (E-HRM) practices have a significant positive effect on employee productivity in the Saudi banking sector.

Sub-Hypotheses

H1a: Electronic recruitment has a significant positive effect on employee productivity.

H1b: Electronic training has a significant positive effect on employee productivity.

H1c: Electronic performance appraisal has a significant positive effect on employee productivity.

H1d: Electronic communication has a significant positive effect on employee productivity.

7. Research Model (Conceptual Framework)

Independent Variable (IV)

Electronic Human Resource Management (E-HRM) Practices

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

Dependent Variable (DV)

Employee Productivity

The conceptual framework assumes that improvements in E-HRM practices positively influence employee productivity. Each dimension of E-HRM is expected to contribute to employees' efficiency, work quality, task completion, and overall job performance (Parry, 2014).

8. Scope of the Study

The scope of this study is defined as follows:

Geographic Scope

The study will be conducted in the Kingdom of Saudi Arabia.

Sector Scope

The research focuses exclusively on the banking sector.

Population Scope

The target population consists of employees working in commercial banks operating within Saudi Arabia.

Time Scope

The study will be conducted during the year 2026.

Subject Scope

The study investigates the relationship between Electronic Human Resource Management practices (electronic recruitment, electronic training, electronic performance appraisal, and electronic communication) and employee productivity.

9. Project Outline

This research is organized into five chapters.

Chapter One introduces the study by presenting the research background, problem statement, research importance, objectives, research questions, hypotheses, conceptual framework, scope of the study, and overall research structure.

Chapter Two reviews the relevant literature on Electronic Human Resource Management and employee productivity. It discusses previous studies, theoretical foundations, and identifies the research gap.

Chapter Three explains the research methodology, including the research design, target population, sampling method, data collection procedures, research instrument, validity and reliability measures, and statistical analysis techniques.

Chapter Four presents the data analysis, hypothesis testing, interpretation of results, and discussion of the findings.

Chapter Five summarizes the major findings, presents conclusions, provides practical recommendations, discusses limitations of the study, and suggests directions for future research.

CHAPTER TWO

Literature Review

2.1 Electronic Human Resource Management (E-HRM)

Electronic Human Resource Management (E-HRM) refers to the application of information technology, web-based systems, and digital platforms to perform human resource management activities. Unlike traditional HRM, which relies heavily on manual procedures and paperwork, E-HRM automates HR functions, making them faster, more accurate, and more accessible. Organizations use E-HRM systems to manage recruitment, employee records, training, performance appraisal, payroll, communication, and other HR processes.

According to (Cheng, 2022), E-HRM enables organizations to improve operational performance by integrating technology into HR activities while reducing administrative costs and increasing efficiency. Furthermore, the adoption of E-HRM has become an essential component of organizational digital transformation, allowing HR departments to focus more on strategic decision-making than routine administrative work.

The Saudi banking sector has increasingly adopted E-HRM practices as part of its digital transformation initiatives under Saudi Vision 2030. Digital HR systems help banks manage large workforces, improve employee experiences, enhance service quality, and support organizational competitiveness.

2.2 Types of E-HRM Practices

The present study focuses on four major E-HRM practices that are commonly implemented in modern organizations.

2.2.1 Electronic Recruitment (E-Recruitment)

Electronic recruitment refers to the use of online platforms, company websites, recruitment portals, and social media to attract, screen, and hire employees. Compared with traditional recruitment methods, electronic recruitment allows

organizations to reach a larger number of qualified applicants in less time and at lower cost.

E-recruitment improves transparency, reduces paperwork, shortens hiring cycles, and enables HR managers to identify suitable candidates more efficiently. Advanced applicant tracking systems (ATS) also help organizations evaluate candidates objectively and maintain recruitment records electronically.

2.2.2 Electronic Training (E-Training)

Electronic training involves delivering learning programs through digital technologies such as online learning platforms, webinars, virtual classrooms, and Learning Management Systems (LMS).

E-training provides employees with continuous learning opportunities regardless of time and location. It also allows organizations to reduce training expenses while increasing employees' knowledge, technical skills, and adaptability to organizational changes.

In the banking sector, electronic training has become increasingly important due to continuous technological developments and regulatory requirements.

2.2.3 Electronic Performance Appraisal

Electronic performance appraisal refers to evaluating employees using computerized systems instead of paper-based evaluations.

These systems enable managers to monitor employee performance continuously, provide timely feedback, establish measurable performance indicators, and improve fairness in evaluation. Digital performance management systems also facilitate performance reporting and support data-driven HR decisions.

Organizations benefit from electronic appraisal systems because they increase transparency, reduce evaluation bias, and encourage employee development.

2.2.4 Electronic Communication

Electronic communication includes all digital communication channels used between HR departments and employees, such as email, HR portals, mobile applications, intranet systems, video conferencing, and instant messaging platforms.

Efficient electronic communication enables employees to access HR services quickly, receive organizational updates, submit requests electronically, and communicate with managers without unnecessary delays.

Strong digital communication systems improve collaboration, employee engagement, and organizational responsiveness.

2.3 Employee Productivity

Employee productivity refers to the efficiency with which employees utilize their skills, knowledge, and available resources to accomplish organizational objectives. It reflects employees' ability to produce high-quality work within a specified period while minimizing errors and resource waste.

Productive employees contribute directly to organizational competitiveness by improving service quality, customer satisfaction, operational efficiency, and financial performance.

Several factors influence employee productivity, including technological infrastructure, employee motivation, organizational support, training opportunities, communication effectiveness, and performance management systems.

Within the banking sector, employee productivity is particularly important because banking services depend heavily on employee accuracy, speed, compliance, and customer interaction.

2.4 Relationship Between E-HRM and Employee Productivity

The relationship between E-HRM and employee productivity has attracted increasing attention in recent years due to organizations' digital transformation efforts.

E-HRM contributes to productivity by reducing administrative tasks, improving information accessibility, accelerating HR services, and supporting better managerial decisions. Employees can spend more time performing value-added activities instead of completing manual HR procedures.

Electronic recruitment improves workforce quality by selecting qualified candidates more efficiently. Electronic training enhances employee knowledge and competencies, enabling employees to perform tasks more effectively. Electronic performance appraisal provides regular feedback that motivates employees to improve performance. Electronic communication strengthens collaboration and facilitates rapid information sharing across departments.

Recent evidence consistently suggests that E-HRM adoption positively influences organizational performance and employee outcomes, although the strength of the relationship may depend on organizational context and implementation quality.

Overall, organizations implementing comprehensive E-HRM systems are more likely to experience higher employee productivity, improved operational efficiency, greater employee satisfaction, and enhanced organizational performance.

2.5 Previous Studies (2021–2025)

Study 1

Cheng and Zou (2021) conducted a meta-analysis to examine whether E-HRM improves organizational performance. The study analyzed numerous empirical studies and found that E-HRM adoption significantly enhances organizational performance, particularly when organizations possess sufficient technological resources and employee readiness.

Study 2

Elsawy and Elbadawi (2021) (Elsawy, 2021) investigated the impact of E-HRM on organizational performance using data collected from 241 employees in UAE organizations. The findings indicated that electronic recruitment, electronic training, electronic performance appraisal, and electronic communication significantly improve organizational performance.

Study 3

Cheng and Zou (2022) (Cheng, 2022) conducted a comprehensive meta-analysis examining the antecedents and consequences of E-HRM adoption. The study concluded that E-HRM positively affects operational performance and organizational effectiveness, especially in organizations with advanced information technology infrastructure.

Study 4

Lakshmi (2023) (Lakshmi, 2023) performed a systematic literature review on E-HRM and employee performance. The review concluded that digital HR

technologies improve employee efficiency, engagement, and organizational performance while reducing administrative costs.

Study 5

El Saeed, Maarouf, and Younis (2025) (El Saeed, 2025) examined the relationship between E-HRM and organizational performance and found that HR service quality mediates the positive relationship between E-HRM implementation and organizational performance.

Study 6

Kandelousi (2025) (Sheikholeslami Kandelousi, 2025) investigated the influence of E-HRM tools on employee productivity and satisfaction. The study reported that E-HRM technologies improve employee productivity through automation, efficient information management, and enhanced employee engagement.

Study 7

Yazough and Tahifa (2025) (Yazough, 2025) reviewed the literature on HRM digitalization and organizational performance. The study concluded that HR digitalization positively affects organizational flexibility, innovation, employee satisfaction, and operational efficiency.

Study 8

Khudhaire and Fzaea (2026) (Khudhaire, 2026) reviewed studies published between 2022 and 2025 and found that digital HR transformation enhances employee efficiency through automation, artificial intelligence, and integrated HR information systems.

2.6 Research Gap

Although previous studies have confirmed the positive impact of Electronic Human Resource Management on organizational performance and employee outcomes, several research gaps remain.

First, most previous studies examined organizational performance rather than focusing specifically on employee productivity.

Second, many empirical studies were conducted in Europe, Asia, or the United Arab Emirates, while relatively few have investigated the Saudi banking sector.

Third, earlier research often examined E-HRM as a single construct without evaluating the individual effects of electronic recruitment, electronic training, electronic performance appraisal, and electronic communication (Creswell, 2023).

Finally, rapid digital transformation in Saudi Arabia requires updated empirical evidence to determine how E-HRM practices influence employee productivity within Saudi banks. Therefore, this study addresses these gaps by examining the effect of the four major E-HRM practices on employee productivity in the Saudi banking sector during 2026.

CHAPTER THREE

Research Methodology

3.1 Introduction

This chapter explains the methodology adopted to achieve the objectives of this study and answer the research questions. It presents the procedures followed in collecting and analyzing data regarding the effect of Electronic Human Resource Management (E-HRM) practices on employee productivity in the Saudi banking sector. The chapter begins by defining the operational meanings of the study variables, followed by the research design, population, sampling technique, and data collection methods. It also discusses the different types of data used in the research and explains the statistical techniques employed to analyze the collected information. A well-defined research methodology is essential because it ensures that the research process is systematic, reliable, and capable of producing valid findings that can be used to draw meaningful conclusions (Creswell, 2023).

3.2 Operational Definitions of the Research Variables

3.2.1 Electronic Human Resource Management (E-HRM)

Electronic Human Resource Management (E-HRM) is the independent variable in this study. It refers to the use of information technology and digital systems to perform human resource management functions electronically. In this study, E-HRM is measured through four dimensions:

- **Electronic Recruitment (E-Recruitment):** The use of online systems and digital platforms to advertise vacancies, receive applications, and recruit employees.
- **Electronic Training (E-Training):** The use of online learning platforms and digital technologies to provide employee training and development.

- **Electronic Performance Appraisal:** The use of computerized systems to evaluate employee performance, provide feedback, and monitor performance indicators.
- **Electronic Communication:** The use of digital communication channels such as HR portals, email, and internal communication systems to facilitate communication between HR departments and employees.

3.2.2 Employee Productivity

Employee Productivity is the dependent variable in this study. It refers to the ability of employees to complete assigned tasks efficiently while maintaining high levels of work quality and achieving organizational objectives. Productive employees utilize organizational resources effectively, meet performance targets, and contribute positively to organizational success. In this study, employee productivity is measured through questionnaire items that evaluate employees' perceptions of their work efficiency, effectiveness, speed of task completion, quality of work, and overall job performance after the implementation of E-HRM practices (Saunders, 2023).

3.3 Research Design

This study adopts a quantitative research approach because it focuses on collecting numerical data that can be statistically analyzed to examine the relationship between E-HRM practices and employee productivity. Quantitative research is appropriate for testing hypotheses, measuring variables objectively, and identifying relationships between independent and dependent variables.

The study follows a descriptive and explanatory research design. The descriptive aspect aims to describe the current level of E-HRM implementation within Saudi banks and examine employees' perceptions of these practices. The

explanatory aspect seeks to determine whether E-HRM practices significantly influence employee productivity by testing the proposed hypotheses.

A cross-sectional survey design is employed because data are collected from respondents at a single point in time rather than over an extended period. This design is suitable for organizational studies where researchers seek to understand current practices and their effects on employees. Furthermore, the use of a structured questionnaire allows the researcher to gather standardized information from a relatively large number of participants efficiently and consistently (Creswell, 2023).

3.4 Research Population and Sampling Techniques

Research Population

The target population consists of employees working in commercial banks operating in the Kingdom of Saudi Arabia.

These employees include individuals from different departments and job positions, such as administrative staff, HR officers, supervisors, and managers, who are familiar with the electronic HR systems used in their organizations.

Sampling Technique

The study employs convenience sampling, a non-probability sampling technique. This method is selected because it allows the researcher to collect data from bank employees who are available and willing to participate in the survey.

Convenience sampling is widely used in business and management research due to its practicality, cost-effectiveness, and ease of data collection.

Sample Size

The study aims to collect responses from approximately **200–300 employees** working in commercial banks across Saudi Arabia.

This sample size is considered adequate for conducting statistical analyses such as correlation and multiple regression.

3.5 Data Collection Method

The primary data for this research are collected using a structured questionnaire developed based on previous studies related to Electronic Human Resource Management and employee productivity. The questionnaire consists of three sections. The first section collects demographic information about the respondents, including gender, age, educational qualification, years of experience, and current job position. The second section measures employees' perceptions of E-HRM practices, while the third section measures employee productivity (Field, 2024).

The questionnaire is distributed electronically through Google Forms, making it easier for respondents to participate regardless of their geographical location. Online distribution also reduces data entry errors and allows responses to be collected more quickly. Before distributing the questionnaire on a large scale, it is reviewed to ensure that the statements are clear, relevant, and easy for respondents to understand. Participation is voluntary, and respondents are informed that their responses will remain confidential and used only for academic research purposes.

3.6 Types of Data

The study uses both primary and secondary data.

Primary Data

Primary data are collected directly from bank employees through the structured questionnaire developed for this research.

Secondary Data

Secondary data are obtained from:

- Academic journal articles
- Books
- Conference papers
- Previous research studies
- Online academic databases such as Scopus, ScienceDirect, Springer, Emerald, and Google Scholar

These sources provide theoretical and empirical support for the study.

3.7 Statistical Analysis Procedures

The collected data will be analyzed using the Statistical Package for the Social Sciences (SPSS).

The following statistical techniques will be applied:

Descriptive Statistics

Descriptive statistics will summarize respondents' demographic characteristics and questionnaire responses using:

- Frequencies
- Percentages
- Means
- Standard Deviations

Reliability Analysis

Cronbach's Alpha will be used to evaluate the internal consistency and reliability of the questionnaire.

A Cronbach's Alpha value of 0.70 or above will be considered acceptable.

Correlation Analysis

Pearson Correlation Analysis will be used to determine the strength and direction of the relationship between E-HRM practices and employee productivity.

Multiple Regression Analysis

Multiple regression analysis will be used to examine the effect of the four E-HRM dimensions (electronic recruitment, electronic training, electronic performance appraisal, and electronic communication) on employee productivity.

This analysis will determine which E-HRM practice has the strongest influence on employee productivity.

Hypothesis Testing

The proposed hypotheses will be tested using a significance level of **0.05** ($p \leq 0.05$).

Hypotheses will be accepted or rejected based on the statistical results obtained from SPSS.

3.8 Conclusion

This chapter has explained the research methodology adopted for investigating the effect of Electronic Human Resource Management practices on employee productivity in the Saudi banking sector. It described the operational definitions of the study variables, the quantitative research design, the target population, sampling technique, data collection procedures, and the different types of data used in the study. In addition, the chapter outlined the statistical techniques that will be employed using SPSS to analyze the collected data and test the proposed hypotheses.

The selected methodology is considered appropriate because it provides a systematic and objective approach for examining the relationship between E-HRM practices and employee productivity. The use of a structured questionnaire and quantitative statistical analysis is expected to produce reliable findings that contribute to both academic knowledge and practical decision-making in the banking sector. The next chapter will present the analysis of the collected data, the results of hypothesis testing, and a discussion of the research findings in relation to previous studies.

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 (Cheng, 2022).

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 (Field, 2024).

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 (Lakshmi, 2023). 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 (Field, 2024).

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, 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 (Hair, 2022).

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 select qualified candidates.	4.15	0.71	3	High
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
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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 improved my job performance and productivity.	4.24	0.61	3	Very High
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 (Saunders, 2023).

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 (Cheng, 2022).

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 (Hair, 2022).

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 (Field, 2024).

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 R² value of 0.703** is only slightly lower than the R² 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 R² and Adjusted R² also suggests that unnecessary variables have not been included in the model (Field, 2024).

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. (Field, 2024)

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) (Cheng, 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 (Bondarouk, 2016).

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 (Lakshmi, 2023).

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 (Cheng, 2022).

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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Appendix A

Questionnaire

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

Dear Respondent,

You are invited to participate in this research study entitled "**The Effect of E-HRM Practices on Employee Productivity in the Saudi Banking Sector.**" The purpose of this questionnaire is to examine how Electronic Human Resource Management (E-HRM) practices influence employee productivity in Saudi banks.

Your participation is voluntary, and all information collected will be kept strictly confidential. The responses will be used for academic research purposes only.

Thank you for your valuable participation.

Instructions

Please indicate your level of agreement with each of the following statements by selecting one option using the following **5-point Likert Scale**:

Scale	Response
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Section A: Demographic Information

Please tick (✓) the appropriate answer.

A1. Gender

☐ Male

☐ Female

A2. Age

☐ Less than 25 years

☐ 25–34 years

- ☐ 35–44 years
- ☐ 45–54 years
- ☐ 55 years and above

A3. Educational Qualification

- ☐ Diploma
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ PhD
- ☐ Other

A4. Years of Experience

- ☐ Less than 5 years
- ☐ 5–10 years
- ☐ 11–15 years
- ☐ 16–20 years
- ☐ More than 20 years

A5. Current Position

☐ Administrative Employee

☐ HR Officer

☐ Supervisor

☐ Manager

☐ Other

Section B: Electronic Human Resource Management (E-HRM) Practices

Dimension 1: Electronic Recruitment (ER)

No.	Statement	1	2	3	4	5
ER1	My bank uses online recruitment systems to attract job applicants.	☐	☐	☐	☐	☐
ER2	Job vacancies are advertised through electronic platforms.	☐	☐	☐	☐	☐
ER3	Electronic recruitment speeds up the hiring process.	☐	☐	☐	☐	☐
ER4	Electronic recruitment helps the bank select qualified candidates.	☐	☐	☐	☐	☐

Dimension 2: Electronic Training (ET)

No.	Statement	1	2	3	4	5
ET1	My bank provides training through online learning platforms.	☐	☐	☐	☐	☐
ET2	Electronic training improves my knowledge and skills.	☐	☐	☐	☐	☐
ET3	Online training programs are easy to access.	☐	☐	☐	☐	☐
ET4	Electronic training helps me perform my job more effectively.	☐	☐	☐	☐	☐

Dimension 3: Electronic Performance Appraisal (EPA)

No.	Statement	1	2	3	4	5
EPA1	My performance is evaluated using an electronic system.	☐	☐	☐	☐	☐
EPA2	Electronic performance appraisal provides fair evaluations.	☐	☐	☐	☐	☐
EPA3	I receive timely feedback through the electronic appraisal system.	☐	☐	☐	☐	☐
EPA4	Electronic performance appraisal motivates me to improve my performance.	☐	☐	☐	☐	☐

Dimension 4: Electronic Communication (EC)

No.	Statement	1	2	3	4	5
EC1	HR communicates with employees through electronic platforms.	☐	☐	☐	☐	☐
EC2	Electronic communication enables quick access to HR information.	☐	☐	☐	☐	☐
EC3	Digital communication improves coordination between employees and HR.	☐	☐	☐	☐	☐
EC4	Electronic communication enhances the efficiency of HR services.	☐	☐	☐	☐	☐

Section C: Employee Productivity

No.	Statement	1	2	3	4	5
EP1	I complete my assigned tasks efficiently.	☐	☐	☐	☐	☐
EP2	I consistently meet my work targets.	☐	☐	☐	☐	☐

EP3	E-HRM systems help me complete my work faster.	☐	☐	☐	☐	☐
EP4	Electronic HR services improve my overall productivity.	☐	☐	☐	☐	☐
EP5	I can perform my duties with fewer errors because of E-HRM systems.	☐	☐	☐	☐	☐
EP6	E-HRM allows me to manage my work more effectively.	☐	☐	☐	☐	☐
EP7	I am more productive because HR processes are electronically managed.	☐	☐	☐	☐	☐
EP8	Overall, E-HRM practices have improved my job performance and productivity.	☐	☐	☐	☐	☐

Research Instruments Table

Variable	Dimension	Code	Number of Items	Item Numbers	Source
Electronic Human Resource Management (Independent Variable)	Electronic Recruitment	ER	4	ER1–ER4	Adapted from Cheng & Zou (2022); Elsaywy & Elbadawi (2021)
	Electronic Training	ET	4	ET1–ET4	Adapted from Lakshmi (2023); El Saeed et al. (2025)
	Electronic Performance Appraisal	EPA	4	EPA1–EPA4	Adapted from Cheng & Zou (2022); El Saeed et al. (2025)
	Electronic	EC	4	EC1–EC4	Adapted from

	Communication				Elsawy & Elbadawi (2021); Yazough & Tahifa (2025)
Employee Productivity (Dependent Variable)	Employee Productivity	EP	8	EP1–EP8	Adapted from Kandelousi (2025); Lakshmi (2023)

Total Questionnaire Items

Section	Number of Items
Demographic Information	5
E-HRM Practices	16
Employee Productivity	8
Total Research Items	29