

3 Chapter 3: Research Methodology

3.1. Introduction

The research aims to delve into the intricate relationship between e-HRM and work efficiency within the banks of Riyadh City. By investigating the impact of e-HRM on various aspects of HR operations, such as recruitment, employee record management, task allocation, and performance evaluations, this study seeks to uncover the extent to which e-HRM can enhance overall work efficiency.

This section explains the methodology applied in this study to answer the research questions and test the hypotheses. The methodology is carefully structured to ensure consistency, reliability, and validity throughout the research process. The section includes the operational definitions for the research variables, the chosen research design, population, sampling methods, data collection techniques, and analysis procedures.

3.2. Operational Definitions for Research Variables

Operational definitions are essential for clearly defining the variables being measured in the study. These definitions specify how each variable is observed, measured, or manipulated, ensuring that the study is consistent and valid.

3.2.1.E-HRM (Independent Variable)

Operational Definition: E-HRM refers to the use of digital tools and technologies that facilitate various human resource functions, including recruitment, performance management, payroll processing, employee communication, and training management. By defining E-HRM in this way, the study captures the full scope of digital HR practices being examined and their impact on organizational processes.

3.2.2.Workforce Efficiency (Dependent Variable)

Operational Definition: Workforce efficiency is measured by assessing the impact of E-HRM systems on reducing administrative workload, improving employee productivity, optimizing time management, and enhancing job satisfaction. This definition considers how E-HRM systems help streamline HR processes, leading to both operational and psychological benefits for employees.

3.3. Research Design (Research Onion)

The research methodology follows the "research onion" model and covers key methodological aspects:

- **Research Philosophy:** Positivist.
- **Research Approach:** Deductive.
- **Research Strategy:** Survey.
- **Research Choice:** Quantitative.
- **Time Horizon:** Cross-sectional.
- **Data Collection and Analysis Techniques:** Statistical analysis of survey results.

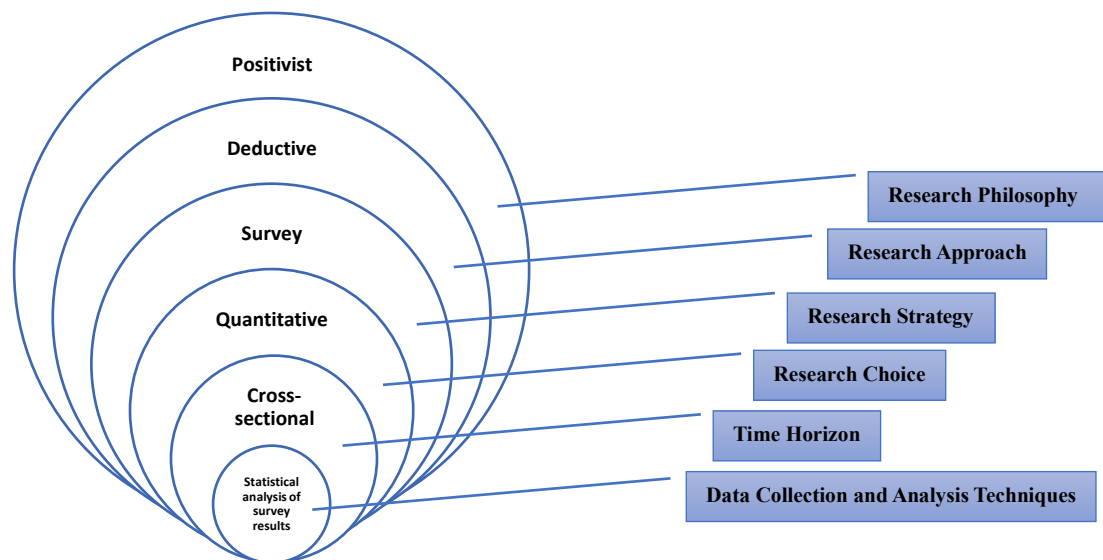


Figure 1: Research Onion. Source: The Researcher.

3.4. Research Population & Sampling Methods and Techniques

3.4.1. Research Population

The target population for this study consists of employees from organizations that have adopted E-HRM systems. This includes HR professionals, managers, and employees actively involved with digital HR tools. The diversity within this group is essential for gaining a comprehensive understanding of the effects of E-HRM systems across different organizational roles.

3.4.2. Research Sample

The sample size was calculated using the Krejcie & Morgan (1970) table to ensure statistical validity and reliability. A diverse sample of employees from various departments (e.g., HR, IT, operations, and marketing) was selected to capture varied experiences and perspectives on the use of E-HRM systems.

3.4.3. Sampling Method & Techniques

A **probability sampling** method, specifically **simple random sampling**, was used. This technique ensures that every individual within the population has an equal chance of being selected, minimizing selection bias and enhancing the representativeness of the sample.

3.5. Data Collection Method

Data were collected through a **structured questionnaire** designed to assess the impact of E-HRM on workforce efficiency. The questionnaire included both quantitative and qualitative items to gather comprehensive data.

3.5.1. The Independent Variable (E-HRM)

The questionnaire used to measure E-HRM was adapted from previous studies on digital HR tools. It consists of five items that cover various dimensions of E-HRM, including recruitment efficiency, performance evaluation, records management, and communication.

Variable	Dimensions	Number of Items
E-HRM	Efficiency, Recruitment, Records, Evaluation, Communication	5

Table 1: The Instrument of The Independent Variable (E-HRM). Source: The Researcher.

3.2.1.The Dependent Variable (Workforce Efficiency)

Workforce efficiency was assessed using three items that measure process improvement, work-life balance, and reduction in administrative tasks. Like E-HRM, a **5-point Likert scale** was used for these items.

Variable	Dimensions	Number of Items
Workforce Efficiency	Process Improvement, Work-Life Balance, Task Reduction	3

Table 2: The Instrument of The Dependent Variable (Workforce Efficiency). Source: The Researcher.

3.3. Types of Data

3.3.1.Primary Data

Primary data were collected through a survey administered to employees actively using E-HRM systems. This data provides direct insights into the relationship between E-HRM adoption and workforce efficiency, making it a crucial part of the study.

3.3.2.Secondary Data

Secondary data were gathered from academic journals, industry reports, and other scholarly works. These sources helped provide additional context and support for the primary data collected, offering a broader understanding of the impact of E-HRM systems on workforce efficiency.

3.4. Data Analysis Methods & Procedures

Data analysis was performed using **SPSS version 28**. The following techniques were employed:

- **Descriptive Analysis:** To provide an overview of the sample population, including demographic characteristics and responses to survey items.
- **Reliability Analysis: Cronbach's Alpha** was used to assess the internal consistency of the questionnaire items, ensuring the reliability of the scales.
- **Validity Analysis: Exploratory Factor Analysis (EFA)** was conducted to examine the factor structure of the items and confirm the constructs being measured.
- **Inferential Statistics: Correlation and regression analyses** were used to assess the relationship between E-HRM and workforce efficiency, and to test the study's hypotheses.

3.5. Conclusion

This chapter has provided a comprehensive overview of the research methodology employed to examine the relationship between E-HRM systems and workforce efficiency. It has detailed the operational definitions of key research variables, outlined the research design, and explained the sampling methods, data collection techniques, and data analysis procedures. These methodological choices ensure the study's validity, reliability, and accuracy in addressing the research objectives. The next chapter will present the findings and analysis based on the data collected.