

Chapter 3: Research Methodology

3.1. Introduction

This chapter outlines the research methodology adopted to examine the relationship between employee engagement and organizational performance in Saudi public sector organizations. It presents the operational definitions of the study's variables, the philosophical foundation and research design, sampling strategy, data collection methods, and the statistical analysis techniques used.

The study is based on a quantitative research approach, which allows for objective measurement and statistical testing of the proposed hypotheses. The methodology is guided by a positivist paradigm, which emphasizes observable, measurable facts, and relies on structured tools to collect data from a sample of public sector employees.

The selection of this methodology is appropriate given the study's aim: to determine the strength and direction of the relationship between engagement and performance. Quantitative methods, particularly those involving survey instruments, are widely used in engagement research and have proven effective in identifying trends across large populations.

The chapter is structured as follows: Section 3.2 defines the study variables operationally, Section 3.3 explains the overall research design using the research onion model, and Sections 3.4 through 3.7 provide details on sampling, data collection, types of data, and statistical procedures. The chapter concludes with a brief summary in Section 3.8.

3.2. Operational Definitions for Research Variables

To ensure clarity and consistency in measurement, the key variables in this study are defined operationally as follows:

Employee Engagement (Independent Variable):

Employee engagement refers to the degree to which employees are emotionally, cognitively, and behaviorally involved in their work. It is measured using a structured

questionnaire containing items adapted from established scales (e.g., Macey & Schneider, 2008). The questionnaire includes Likert-scale items assessing:

- Emotional engagement (e.g., enthusiasm, pride),
- Cognitive engagement (e.g., mental focus, alertness),
- Behavioral engagement (e.g., initiative, persistence).

Scores are calculated based on participant responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Higher average scores indicate higher levels of engagement.

Organizational Performance (Dependent Variable):

Organizational performance represents how well a public sector institution achieves its objectives in areas such as service quality, responsiveness, innovation, and productivity. This study uses self-reported performance perceptions from employees, measured through Likert-scale items based on the Balanced Scorecard framework and Vision 2030 priorities.

The performance scale includes dimensions such as:

- Goal achievement,
- Service delivery quality,
- Responsiveness to citizen needs,
- Innovation encouragement,
- Accountability and efficiency.

Higher scores reflect more favorable employee perceptions of institutional performance.

3.3. Research Design (Research Onion)

This study adopts a research design based on the “**research onion**” model proposed by Saunders et al. (2012), which systematically guides the research process through several layers, from philosophy to data collection.

Research Philosophy:

The research is grounded in positivism, which assumes that reality is objective and can be measured through empirical observation. This aligns with the quantitative approach adopted in this study, as it seeks to test hypotheses using observable data.

Research Approach:

A **deductive approach** is used, where hypotheses are formulated based on existing theories and are tested through data analysis. This method is suitable for studies aiming to confirm or reject predefined relationships between variables.

Research Strategy:

The strategy adopted is a **survey**, which is commonly used in social sciences for gathering standardized data from a large population. Surveys are ideal for studying attitudes, perceptions, and behaviors across various organizations.

Time Horizon:

The study is **cross-sectional**, meaning that data will be collected at a single point in time rather than longitudinally. This is appropriate given the study's time constraints and its objective to explore existing relationships rather than track changes over time.

Methodological Choice:

A **mono-method quantitative design** is used, relying exclusively on numerical data collected through a structured questionnaire. This enhances objectivity and allows for statistical analysis using tools like SPSS.

3.4. Research Population & Sampling Methods and Technique**Research Population:**

The target population for this study consists of full-time employees working in Saudi public sector institutions. This includes ministries, government agencies, and public service departments located primarily in major urban centers such as Riyadh, Jeddah, and Dammam. The population encompasses employees from various job levels and departments, including administrative, technical, and managerial roles.

Sampling Technique:

To ensure that the sample is representative of different roles and departments, the study uses a stratified random sampling method. This technique divides the population into subgroups (strata) based on characteristics such as job level (staff vs. manager) or department. Participants are then randomly selected from each stratum, ensuring proportional representation.

Sample Size:

A total sample of 200 employees is targeted for the survey. This size was determined using statistical formulas that consider the confidence level (95%), margin of error ($\pm 5\%$), and expected response distribution. A sample of this size is adequate to perform descriptive and inferential statistical analyses and allows for generalization within the limitations of the study scope.

3.5. Data Collection Method

The study utilizes a structured, self-administered questionnaire as the primary tool for data collection. This method is widely accepted in quantitative research due to its efficiency in gathering standardized responses from a large number of participants.

Questionnaire Structure:

The questionnaire is divided into three main sections:

- **Section A: Demographic Information**
Includes items on gender, age, job level, and years of service.
- **Section B: Employee Engagement**
Measures emotional, cognitive, and behavioral engagement using validated Likert-scale items adapted from previous studies (e.g., Saks, 2006; Macey & Schneider, 2008).
- **Section C: Organizational Performance**
Contains Likert-scale items evaluating performance indicators such as service quality, responsiveness, innovation, and accountability.

Administration Procedure:

- The questionnaire is distributed electronically using Google Forms or email links.
- Participation is voluntary and anonymous.
- Participants are given clear instructions and an explanation of the study's purpose.

Ethical Considerations:

- Respondents are informed that their data will be used for academic purposes only.
- No personally identifiable information is collected.
- Consent is implied through the voluntary completion of the questionnaire.

This method allows for efficient data collection from a geographically dispersed sample and supports the study's aim to analyze measurable perceptions of engagement and performance.

3.6. Types of Data

This study uses two primary types of data to support its research objectives: primary data and secondary data.

Primary Data:

Primary data refers to the original data collected directly from the research participants. In this study, primary data is gathered through the structured questionnaire administered to employees working in Saudi public sector organizations.

The data includes:

- Employee perceptions of their engagement levels (emotional, cognitive, behavioral),
- Their assessment of their organization's performance (service quality, efficiency, responsiveness),
- Demographic characteristics such as job role, tenure, and age.

The primary data serves as the foundation for hypothesis testing and empirical analysis.

Secondary Data:

Secondary data refers to information obtained from existing sources, including:

- Published journal articles and empirical studies,
- Government reports and strategic plans (e.g., Saudi Vision 2030),
- Public performance indicators from ministries or oversight bodies,
- Theoretical models such as the Job Demands-Resources (JD-R) model and the Balanced Scorecard.

Secondary data is used to build the theoretical framework of the study, justify the selection of variables, and compare findings with previous research.

The integration of both types of data enhances the credibility, depth, and context of the research findings.

3.7. Statistical Analysis Procedures

The data collected from the questionnaire will be analyzed using Statistical Package for the Social Sciences (SPSS) version 26. The purpose of the statistical analysis is to examine the relationships between employee engagement and organizational performance, as well as to test the research hypotheses developed in Chapter 1.

The analysis process consists of the following steps:

1. Descriptive Statistics:

Descriptive analysis is conducted to summarize the characteristics of the sample and provide an overview of the data. This includes:

- Frequencies and percentages for demographic variables (e.g., gender, job level),
- Measures of central tendency (mean, median) and dispersion (standard deviation) for engagement and performance items.

These statistics help understand the general trends and variability within the sample.

2. Reliability Testing (Cronbach's Alpha):

To ensure internal consistency of the survey scales, Cronbach's alpha coefficient is calculated. A value of $\alpha \geq 0.70$ is considered acceptable, while $\alpha \geq 0.80$ indicates high reliability. The test is applied separately to the engagement and performance sections.

3. Correlation Analysis (Pearson Correlation):

Pearson's correlation coefficient (r) is used to test the strength and direction of the relationship between employee engagement and organizational performance. A positive correlation ($r > 0$) suggests that higher engagement is associated with better performance.

4. Regression Analysis:

A multiple regression model is used to assess the extent to which different dimensions of engagement (emotional, cognitive, behavioral) predict organizational performance. Regression coefficients (β) and significance values (p-values) are reported to determine which factors are most influential.

5. Moderation Analysis:

A moderated regression analysis is conducted to examine whether organizational support and communication influence the strength of the relationship between engagement and performance. An interaction term is included in the model, and its significance is tested.

6. Interpretation of Results:

All statistical findings are interpreted in light of the theoretical frameworks reviewed in Chapter 2. Patterns are compared with those observed in prior studies, and implications are discussed.

By employing these techniques, the study ensures a rigorous and systematic analysis of the research problem.

3.8. Conclusion

This chapter presented the research methodology designed to explore the relationship between employee engagement and organizational performance in Saudi public sector

organizations. The study adopts a quantitative, cross-sectional approach grounded in a positivist philosophy, using a structured questionnaire to gather data from a stratified random sample of 200 employees.

The research onion framework guided the selection of methodology, including the deductive reasoning approach, survey strategy, and mono-method quantitative design. Key research variables were defined operationally, and appropriate statistical tools such as descriptive statistics, correlation, regression, and moderation analysis were selected to analyze the data.

The use of validated scales, ethical data collection procedures, and rigorous statistical analysis aims to enhance the validity and reliability of the study. The methodology aligns closely with the research objectives and is well-suited to generate empirical evidence on how employee engagement affects organizational performance in a public administration context.

The next chapter will present the results of the statistical analysis, including detailed findings on the sample characteristics, reliability of the instruments, and hypothesis testing outcomes.