

3. Chapter 3: Research Methodology

3.1 Introduction

This chapter explains the research methodology used to investigate the impact of modern office technologies and digital transformation on organizational efficiency and productivity within organizations in Jeddah, Saudi Arabia. The methodology includes the research design, operational definitions of variables, sampling method, data collection process, and statistical techniques used to analyze the data.

3.2 Operational Definitions of Variables

- **Modern Office Technologies:** Refers to digital tools such as cloud computing, workflow systems, automation and artificial intelligence to streamline office processes.
- **Digital Transformation:** Integration of digital technologies to improve processes and communication.
- **Efficiency / Productivity:** Improvements in workflow speed, reduction of errors, and employee task completion.
- **Communication and Collaboration:** The ability to enhance teamwork and information sharing using digital platforms.

3.3 Research Design (Research Onion Model)

This research adopts a quantitative approach and follows the Research Onion model (Saunders et al., 2019):

- **Research Philosophy:** Positivism
- **Research Approach:** Deductive
- **Research Strategy:** Survey
- **Time Horizon:** Cross-sectional

3.4 Population and Sampling

The target population includes office employees and administrative staff in private and public organizations located in Jeddah, Saudi Arabia. A sample of 40 respondents is used. The sampling method applied is convenience sampling due to accessibility and availability of respondents.

3.5 Data Collection Method

Primary data was collected using a structured questionnaire distributed electronically (Google Form). The survey consisted of closed-ended questions measured using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

3.6 Types of Data

- Primary Data: Obtained directly from respondents using a questionnaire.
- Secondary Data: Derived from academic journals, books, and prior research studies (used in Chapter 2).

3.7 Statistical Analysis Procedures

The collected data is analyzed using SPSS software. The analysis includes:

- Reliability test (Cronbach's Alpha)
- Descriptive statistics
- Hypothesis testing using regression and correlation analysis

3.8 Conclusion

This chapter outlined the research methodology followed in this study. It described the research design, sampling process, data collection tools, and statistical procedures. The next chapter presents the statistical analysis and research findings.