

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

This chapter presents the research methodology used to investigate the role of e-procurement in enhancing supply chain performance, with a case study of Lafarge Africa PLC. The methodology encompasses the research design, population, sample size, data collection methods, data analysis techniques, and ethical considerations. The chosen methodology is aligned with the research objectives, which aim to understand the impact of e-procurement on supply chain performance at Lafarge Africa PLC and identify the key factors that contribute to its effectiveness.

#### 3.2 RESEARCH DESIGN

This study employs a descriptive research design, which is suitable for investigating the role of e-procurement systems in enhancing supply chain performance. The descriptive design allows for an in-depth exploration of how e-procurement has been implemented at Lafarge Africa PLC, as well as the challenges and benefits experienced by the company in its adoption of e-procurement. The design also enables the collection of both qualitative and quantitative data, providing a comprehensive understanding of the research topic.

#### 3.3 SOURCE OF DATA

Both primary and secondary data will be collected for this study.

**Primary Data:-** Primary data will be collected through structured questionnaires and semi-structured interviews. The questionnaires will be their experiences with e-procurement system and their experiences with e-procurement system and their perception of its impact on supply chain performance, the semi-structure interview will be conducted with key personnel including senior procurement officer and supply chain managers to obtain qualitative data on the challenges and benefits associated with e-procurement. The combination of questionnaires and interviews will provide a balanced approach to data collection, ensuring that both numerical and narrative data are gathered.

**Secondary Data:-** Secondary data will be collected from existing literature, company reports, and official documents related to the implementation of e-procurement system at Lafarge Plc. This data will provide background information and context for the primary data collected and will help to validate the findings from the primary research.

#### 3.4 DATA COLLECTION

Data collection for this research project will be done using two research instruments or data collection tools, the main instrument of data collection in this study was questionnaires. A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from respondents.

The items in the questionnaire were structured (closed ended) and the structured questions measured the subjective responses to clarify the objective responses and at the same time, enhance formulation of recommendations for the study.

The second data collection tools involve the use of interview. Interview involves one to one oral conversation which is intended to obtain relevant information with respect to the research project.

### 3.5 RESEARCH POPULATION AND SAMPLE SIZE

The population of this study consists of employees at Lafarge Africa Plc who are directly involved in procurement, supply chain management, and related functions. These employees are expected to have the knowledge and experience required to provide valuable insights into the impact of e-procurement on supply chain insights into the impact of e-procurement on supply chain performance the population includes procurement officers, supply chain managers and IT staff who are responsible for maintaining and supporting the e-procurement system within the organization.

### 3.6 SAMPLE PROCEDURE METHOD

A purposive sampling technique is used to select participants for the study. This sampling method is appropriate because it allows for the selection of individuals who are knowledgeable about the e-procurement system and its impact on supply chain operations. A sample size of 50 employees will be selected from various departments within Lafarge Africa PLC, including procurement, logistics, and IT. The sample will be chosen based on their involvement in e-procurement processes and their ability to provide relevant insights into the research questions.

### 3.7 STATISTICAL TECHNIQUES USED IN DATA ANALYSIS

The data collected from the questionnaires and interviews will be analyzed using both qualitative and quantitative methods.

**Qualitative Data Analysis:-** The qualitative data obtained from the interviews will be analyzed using thematic analysis. This involves identifying key themes and patterns from the interview transcripts and categorizing the data based on research questions. Thematic analysis will help in understanding the deeper insights into the experiences of the participant, with procurement and its impact on supply chain operations at Lafarge Africa PLC.

**Quantitative Data Analysis:-** The data obtained from the questionnaires will be analyzed using descriptive statistics, such as frequency distributions, percentage, and mean scores this will provide a clear understanding of the respondents views on the role of e-procurement in enhancing supply chain performance. Additionally inferential statistics. Such as correlation and regression analysis may be used to examine the relationship between e-procurement and supply chain performance.