

**FACTORS AFFECTING EMPLOYEES TRAINING AND DEVELOPMENT
IN TANZANIA PUBLIC SECTORS; A CASE STUDY OF TANESCO
HEADQUARTERS**

DEODAT RENATUS KAPINGA

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF HUMAN
RESOURCES MANAGEMENT
DEPARTMENT OF MARKETING ENTREPRENEURSHIP AND
MANAGEMENT
OF THE OPEN UNIVERSITY OF TANZANIA**

2024

CERTIFICATION

The undersigned certifies that he has read and at this moment recommends for acceptance by the Open University of Tanzania a dissertation entitled: **“Factors Affecting Employees Training and Development in Tanzania Public Sectors; A Case Study of TANESCO Headquarters”**, in partial fulfillment of the requirements for the degree of master of human resource management (MHRM) of the Open University of Tanzania.

.....

Dr. Chacha, Matoka

(1st Supervisor)

.....

Date

.....

Dr. Janeth, Isanzu

(2nd Supervisor)

.....

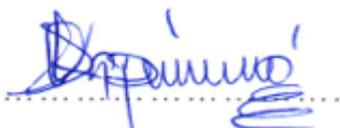
Date

COPYRIGHT

This dissertation is copyright material protected under the Berne Convention for the Protection of Literacy and Artistic Works of 1886, as amended in the Paris Act of 1079, in which Tanzania became a party to the convention in 1994 and other international enactment on behalf, of intellectual property. No part of this dissertation may be reproduced, stored in any retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the author or the Open University of Tanzania on that behalf.

DECLARATION

I, **Deodatus Kapinga**, hereby declare that this dissertation is my original work. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirements for the Degree of Master of Human Resource Management (MHRM)



Signature

.....

Date

DEDICATION

I dedicate this dissertation to my wife Florence Lameck Mangwela and my children Arnold, Franco and Leah.

ACKNOWLEDGEMENTS

I start by expressing my gratitude thanks to my Lord and God's saviour, for his guidance, blessings and strength throughout my dissertation. I also extend my wholehearted gratitude to the Open University of Tanzania for allowing me to undertake this research, enriching my academic knowledge, and honing my scholarly skills.

My debt of gratitude is immeasurable to my supervisors Dr. Chacha Matoka and Dr. Janeth Isanzu whose invaluable counsel, unwavering backing, and perceptive insights have played a pivotal role in shaping this study. I wish to convey my appreciation to my colleagues and friends for their companionship and unwavering support during this arduous endeavour. Their constructive dialogues and words of encouragement have been a wellspring of motivation.

I want to express my heartfelt thanks to my family for their endless love, understanding, and ceaseless encouragement throughout my academic pursuits. Their unwavering faith in me has been a perpetual wellspring of inspiration. I wish to acknowledge all those who have contributed in any capacity to the fruition of this dissertation. Your support, regardless of its magnitude, has been indispensable in bringing this research to fruition.

Finally, yet importantly, I extend my gratitude to my co-staff members for being an integral part for all time of my academic expedition.

ABSTRACT

This study assessed the factors affecting training and development in the case of TANESCO headquarters. The study was guided by three specific objectives; to determine the effect of training needs assessment on employees' training and development, to determine the effect of Budget Constraints on employees' training and development and to determine the Effect of Leadership Support on employees' training and development. Positivist philosophy was utilized in this study. A quantitative approach was also employed with an explanatory design. A sample of 90 employees from TANESCO was drawn from a population of 285 using stratified sampling. Structured questionnaires were used to collect data. Descriptive statistics and multiple regression analysis were used to analyze data. The study found that training needs assessment and leadership support were positive and significantly related to training and development while budget constraints were found to be negative and significantly related to training needs. Based on those findings the recommends that TANESCO should ensure that TNAs are conducted regularly to identify evolving skill gaps and training needs within the organization. Secondly, TANESCO should identify and prioritize critical training needs that align with TANESCO's strategic objectives despite budget limitations and lastly, leaders at all levels within TANESCO should visibly demonstrate their commitment to training and development initiatives.

Keywords: *Training Needs Assessment, Budget Constraints, Leadership Support, Training and Development*

TABLE OF CONTENTS

| | |
|---|------------|
| CERTIFICATION | ii |
| COPYRIGHT | iii |
| DECLARATION..... | iv |
| DEDICATION..... | v |
| ACKNOWLEDGEMENTS..... | vi |
| ABSTRACT | vii |
| LIST OF TABLES | xiv |
| LIST OF FIGURES | xv |
| LIST OF ABBREVIATIONS AND ACRONYMS | xvi |
| CHAPTER ONE | 1 |
| INTRODUCTION..... | 1 |
| 1.1 Overview | 1 |
| 1.2 Background of the Study..... | 1 |
| 1.3 Statement of the Problem | 4 |
| 1.4 Objective of the Study..... | 5 |
| 1.4.1 General Objective..... | 5 |
| 1.4.2 Specific Objectives..... | 5 |
| 1.5 Significance of the Study | 6 |
| 1.6 Scope of the Study..... | 7 |
| CHAPTER TWO | 9 |
| LITERATURE REVIEW..... | 9 |
| 2.1 Overview | 9 |
| 2.2 Definitions of Concepts..... | 9 |

| | | |
|-------|--|-----------|
| 2.2.1 | Training Needs Assessment | 9 |
| 2.2.2 | Budget Constraints | 10 |
| 2.2.3 | Leadership Support | 10 |
| 2.2.4 | Employees Training and Development | 11 |
| 2.2.5 | Tanzania Public Sector | 12 |
| 2.3 | Theoretical Literature Review | 12 |
| 2.3.1 | Human Capital Theory | 12 |
| 2.4 | Empirical Literature Review | 16 |
| 2.4.1 | The Effect of Training Needs Assessment on Employee Training and Development at TANESCO | 16 |
| 2.4.2 | The Effect of Budget Constraints on Employee Training and Development at TANESCO | 17 |
| 2.4.3 | The Effect of Leadership Support on Employee Training and Development at TANESCO | 18 |
| 2.5 | Research Gap | 20 |
| 2.6 | Conceptual Framework | 22 |
| 2.7 | Theoretical Framework | 22 |
| 2.7.1 | The Effect of Training Needs Assessment on Employee Training and Development at TANESCO | 22 |
| 2.7.2 | The Effect of Budget Constraints on Employee Training and Development at TANESCO | 23 |
| 2.7.3 | The Effect of Leadership Support on Employee Training and Development at TANESCO | 23 |
| | CHAPTER THREE | 25 |

| | |
|---|-----------|
| RESEARCH METHODOLOGY | 25 |
| 3.1 Overview | 25 |
| 3.2 Research Philosophy | 25 |
| 3.3 Research Approach | 26 |
| 3.4 Research Design..... | 27 |
| 3.5 Area of the Study..... | 28 |
| 3.6 Population of the Study | 29 |
| 3.7 Sample Size and Sampling Techniques | 30 |
| 3.7.1 Sample Size..... | 30 |
| 3.7.2 Sampling Technique..... | 32 |
| 3.8 Data Collection..... | 33 |
| 3.8.1 Structured Questionnaire..... | 34 |
| 3.9 Data Process | 34 |
| 3.9.1 Pilot Study | 35 |
| 3.9.2 Data Entry | 35 |
| 3.9.3 Data Cleaning..... | 35 |
| 3.9.4 Data Coding..... | 36 |
| 3.9.5 Data transformation..... | 36 |
| 3.9.6 Error Check | 36 |
| 3.9.7 Missing Variable | 37 |
| 3.10 Data Analysis | 37 |
| 3.11 Regression Model..... | 37 |
| 3.12 Regression Assumptions | 38 |
| 3.12.1 Normality Test..... | 38 |

| | | |
|---|--|-----------|
| 3.12.2 | Linearity Test | 39 |
| 3.12.3 | Homoscedasticity Test | 39 |
| 3.12.4 | Multicollinearity Test..... | 40 |
| 3.13 | Validity..... | 40 |
| 3.14 | Reliability..... | 40 |
| 3.15 | Ethical Considerations..... | 41 |
| CHAPTER FOUR..... | | 43 |
| RESEARCH FINDINGS ANALYSIS AND DISCUSSION..... | | 43 |
| 4.1 | Overview | 43 |
| 4.2 | Demographic Characteristics of the Respondents..... | 43 |
| 4.2.1 | Gender Characteristics of the Respondents..... | 43 |
| 4.2.2 | Age Characteristics of the Respondents..... | 44 |
| 4.2.3 | Education Level Characteristics of the Respondents | 44 |
| 4.2.4 | Working Experience Characteristics of the Respondents | 45 |
| 4.3 | Descriptive Statistics Results | 46 |
| 4.3.1 | The Effect of Training Needs Assessment Descriptive Statistics Results..... | 46 |
| 4.3.2 | The Effect of Budget Constraints Descriptive Statistics Results | 48 |
| 4.3.3 | The Effect of Leadership Support Descriptive Statistics Results | 50 |
| 4.3.4 | Employees Training and Development Descriptive Statistics Results ... | 52 |
| 4.4 | Regression Assumptions Test Results | 54 |
| 4.4.1 | Normality Test Results..... | 54 |
| 4.4.2 | Linearity Test Results..... | 55 |
| 4.4.3 | Homoscedasticity Test Results..... | 56 |

| | | |
|-------|---|-----------|
| 4.5 | Multiple Regression Analysis Results..... | 57 |
| 4.5.1 | Model Summary Results | 57 |
| 4.5.2 | Analysis of Variance Results | 58 |
| 4.5.3 | Regression Coefficient Analysis Results | 59 |
| 4.6 | Discussion of the Findings | 61 |
| 4.6.1 | The Effect of Training Needs Assessment on Employees Training and Development..... | 62 |
| 4.6.2 | The Effect of Budget Constraints on Employees Training and Development..... | 63 |
| 4.6.3 | The Effect of Leadership Support on Employee Training and Development..... | 65 |
| | CHAPTER FIVE..... | 68 |
| | SUMMARY CONCLUSION AND RECOMMENDATIONS..... | 68 |
| 5.1 | Overview | 68 |
| 5.2 | Summary of the Findings | 68 |
| 5.3 | Conclusion..... | 69 |
| 5.4 | Implications | 70 |
| 5.5 | Recommendations | 71 |
| 5.5.1 | The Effect of Training Teed Assessment on Employees Training and Development..... | 71 |
| 5.5.2 | The Effect of Budget Constraints on Employees Training and Development..... | 72 |
| 5.5.3 | The Effect of Leadership Support on Employee Training and Development..... | 72 |

| | | |
|-----|---|-----------|
| 5.6 | Recommendations for Further Studies | 73 |
| | REFERENCES | 74 |
| | APPENDICES | 82 |

LIST OF TABLES

| | | |
|------------|---|----|
| Table 3.1: | Unity of Inquiry | 30 |
| Table 3.2: | The Sampling Distribution | 31 |
| Table 3.3: | Reliability Test Results..... | 41 |
| Table 4.1: | Demographic Statistics Results | 46 |
| Table 4.2: | The Effect of Training Needs Assessment Descriptive Statistics Results | 48 |
| Table 4.3: | The Effect of Budget Constraints Descriptive Statistics Results | 50 |
| Table 4.4: | The Effect of Leadership Support Descriptive Statistics Results..... | 52 |
| Table 4.5: | Training and Development – Dependent Variable..... | 53 |
| Table 4.6: | Model Summary Results | 58 |
| Table 4.7: | ANOVA Results | 59 |
| Table 4.8: | Regression Coefficient Results..... | 61 |

LIST OF FIGURES

Figure 2.1: Conceptual Framework 22

Figure 4.1: Histogram 55

Figure 4.2: P – P Plot for Regression Standardized Residuals Results 56

Figure 4.3: Scatter Plot 57

LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---------|--|
| BUDGET | Budget Constraints |
| CUDBAS | Common Understanding of Database Systems |
| ECE | Early Childhood Education |
| HCT | Human Capital Theory |
| HQ | Headquarters |
| HRM | Human Resource Management |
| KSA | Knowledge, Skills, and Abilities |
| LS | Leadership Support |
| NGO | Non-Governmental Organizations |
| OLS | Ordinary Least Square |
| SPSS | Statistical Package for Social Science |
| STEM | Science, Technology, Engineering and Mathematics |
| TANESCO | Tanzania Electric Supply Company Limited |
| TD | Training and Development |
| TNA | Training Needs Analysis |
| TNA | Training Needs Assessment |
| UCH | University College Hospital |
| WHO | World Health Organization |

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter addressed the study's history, problem statement, objectives, research questions, study scope, study importance, and proposal organization.

1.2 Background of the Study

A crucial component of human resource development is training. In the current environment, training is becoming more and more seen as a way to support both the organization's and each employee's growth (Noe, 2020). Additionally, workers who participate in a successful training program show a passion for their jobs and a desire to give the company their all (Armstrong, 2021).

Recognizing the growing interest in this remarkable process due to the changing nature of the organization, its structure, globalization, and technological advancement, staff training and development is an essential lifelong process that aims to improve employees and the organization (Jackson, Schuler, & Werner, 2021). It should be continued beyond the initial qualifications in efforts to maintain, upgrade, and update knowledge and skills. Many organizations, like TANESCO, have well-designed training programs with clear goals to influence people's knowledge, comprehension, behaviour, and skills as well as their values and beliefs (Noe, 2020; Armstrong, 2021; Schein, 2017). The gap that arises as a result of global technical advancements that occur globally and impact day-to-day Company operations is what drives TANESCO's demand for employee training. Several

researchers have worked very hard and have produced a variety of results. According to EL Hajjar and Alkhanaizi's (2018) research, various factors influence the effectiveness of employee training. A case study conducted in Bahrain revealed that certain factors, such as training schedule, training environment, training contents, facilities and materials, and presentation style, positively impact training and development. Nevertheless, there was no mention of fiscal concerns, leadership support, or training needs analyses. This leaves a hole in the research. Furthermore, research on the effects of training and development on workers' performance by Burhan et al. (2021) and Karim, Choudhury, and Latif (2019) revealed that workers are aware of training, that training motivates workers, and that training and development leads to improved performance. Nevertheless, there was little discussion of the variables influencing training and development. Thus, it becomes necessary to evaluate the factors.

Within the African framework, Adeyi, Apansile, Okere, and Okafor (2018), Nama, Daweti, Lourens, and Chikukwa (2022), and Igudia (2022). Training and development were shown to be more likely to improve employee performance when the effects were examined on staff performance and service delivery at a local municipality in South Africa. Additionally, the outcomes demonstrated that staff with training had a higher likelihood of enhancing service performance. There was no introduction of issues impacting training and development. Additionally, Hassan (2021) investigated how training and development programs affected workers in the Jig-Jiga City Administration Council, Somali Regional State, Ethiopia, and discovered that issues with these programs, such as interpersonal relationships, the

inability to advance professionally, and unfair treatment, had a detrimental impact on training and development. It was necessary to perform this study on the elements impacting employees' training and development because the previous study did not examine these factors either.

Pallangyo and Hanai (2020) investigated the impact of training and development on employee retention from Tanzania's point of view. Consequently, the impact of training on retention was highlighted rather than any factors influencing training, which highlights the necessity for a study that evaluates the factors impacting training. Furthermore, Kaaya and Shishiwa (2021) investigated the elements influencing staff training initiatives that are successful in public enterprises. Since the objective of this study was training programs, a study on the variables influencing training and development is required. Additionally, Lameck, (2022) investigated how employee performance at the People's Bank of Zanzibar, Tanzania, was affected by training and development. The study discovered a favourable correlation between employee performance and training and development. The study did not examine variables that were more like those in other studies that focused on the effect of training.

Applying the human capital hypothesis developed by Becker (1964). The factors influencing training and development were used to evaluate the training and development of employees. Training needs analysis was one of the human capital variables that was investigated to support this study. It clarified why it is necessary to analyze training needs before doing training. Second, financial concerns were

examined, and it was generally suggested that budgetary restraints hurt training and development. Lastly, another important element of this study that came from the human capital theory was the managers' or leaders' commitment to supporting the training. In doing so, a critical evaluation of the elements influencing training and development in Tanzania's public sector with an emphasis on TANESCO was conducted.

1.3 Statement of the Problem

Even though the training program was well-designed, the results showed that poor leadership support, inadequate and poor allocation of training funds, and a poorly or never conducted training needs assessment (Adewole, Salawu, & Bello, 2020) were all problems in the implementation of the training program and development within the Public Service Management Office (Ohemeng, & Kamga, 2020).

Kallarakkal argues that training and development initiatives in non-governmental organizations (NGOs) are undermined by insufficient funding, a lack of support from upper management, internal politics, and favouritism. The literature makes clear that the majority of research on the variables impeding Tanzanian public sector employees' ability to get effective training has been done primarily in the highest categories. As a result, many workers did not think that fairness was the basis for selecting workers for training; workers in lower cadres did not think they were receiving the same treatment as their more senior colleagues. Current studies found that implementing training needs assessment is a huge problem (Wan Ngh, Buniyamin, 2021). Moreover, Adewole, Salawu, and Bello, (2020) found that there

is importance in conducting training needs assessment although no study has been conducted to assess the effect of training needs assessment on employees' training and development. Additionally, Tang, Liu, and Liang (2022) found that budget allocation to training is inadequate.

Also, Anaman, (2023) finding reported on budget implementation not the adverse effect of the budget deficit. Building on those findings Sujchaphong, Nguyen, Melewar, Sujchaphong, and Chen, (2020) found that managers' or leaders' involvement in employee training is questionable Also, Dea and Tekalign, (2022) found that managerial leadership roles have a significant effect on building institutions' human resource capability. However, nothing on the effect of leadership support was unveiled. Therefore, it is from this perspective that this study intends to build on these gaps by assessing the factors affecting training and development in Tanzania's public sector focusing on TANESCO Headquarters.

1.4 Objective of the Study

1.4.1 General Objective

The general objective of this study was to assess factors affecting employee training and development in Tanzania's Public sectors, and the area of the case study is TANESCO- Headquarters.

1.4.2 Specific Objectives

- i. To determine the effect of training needs assessment on employees' training and development

- ii. To determine the effect of Budget Constraints on employees' training and development
- iii. To determine the Effect of Leadership Support on employees' training and development

1.5 Significance of the Study

Understanding the factors influencing training and development helps in creating more effective training programs. By identifying and addressing these factors, TANESCO can enhance the skills and competencies of its employees, leading to improved job performance and productivity. Also, the study aids in aligning the training and development programs with TANESCO's strategic goals. It ensures that the training initiatives are not just routine activities but are strategically designed to meet the organization's long-term objectives.

Moreover, identifying and addressing the factors that affect training and development can lead to higher employee satisfaction and motivation. Effective training programs make employees feel valued and invested which can increase their loyalty and reduce turnover rates. In addition, better-trained employees are more efficient and effective in their roles. This can lead to improved operational efficiency, fewer errors, and higher quality of service. For a critical public service provider like TANESCO, this is particularly important.

The study's conclusions can help public sector policymakers understand the obstacles to staff training and development that currently exist. Better frameworks and policies

that encourage ongoing learning and development may result from this. Additionally, the study broadens our understanding of human resource development, especially as it relates to emerging nations' public sector organizations. It supports or refutes accepted theories and approaches of staff development and training. The study provides a basis for further research by highlighting gaps in current understanding and practice. Scholars can expand upon these results to investigate novel ideas or go more deeply into particular areas that the investigation discovered.

1.6 Scope of the Study

This study focused on the factors affecting employee training and development in Tanzania's public sectors, especially in TANESCO-Head Quarters Dodoma. The decision of a section such as the area of study is arrived at due to several various constraints that might arise along the study. Moreover, this assessment involved all staff working at TANESCO Headquarters. The data and other valuable information expected to be collected and analyzed were mostly from the years of 2019 up to 2023.

There are five chapters in the dissertation. The background, issue statement, goals, research questions, significance, and scope of the study are all included in the first chapter, which also serves as an introduction. The conceptual foundation of the study is summarized in Chapter 2, along with an evaluation of the theoretical and empirical literature, which is where the research gap is formed. To clarify the study's methodology, the third chapter discusses the research design, research methods, study region, target population, and sample. The types of data that were gathered and

the techniques utilized to process them are also covered in this chapter. Research findings and discussion are given in Chapter 4, along with results from multiple regression analysis and descriptive statistics. An overview of the results, conclusions, ramifications, and suggestions are provided in Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

An explanation of the study's core principles is provided in Chapter Two, along with a theoretical literature review that explains social learning theory. Additionally, a review of the empirical literature that is current is provided, in which papers are evaluated critically in light of this investigation. The final parts address methodological, theoretical, contextual, and knowledge limitations in the research. The conceptual framework presenting the variables comes next.

2.2 Definitions of Concepts

Defining key concepts ensures clarity and precision in communication. It helps researchers and readers understand the specific meanings and interpretations of terms used in the study, reducing ambiguity and confusion (Newton, 2012). The definition of key concepts is presented. Concepts defined are training needs assessment, budget constraints, leadership support and employee training and development.

2.2.1 Training Needs Assessment

Training needs assessment is the systematic process of identifying the gap between employees' current knowledge, skills, and abilities (KSAs) and those required to meet organizational goals and objectives (Noe, 2017). However, (Goldstein, and Ford, (2002) define training needs assessment as the process of determining the specific knowledge, skills, and abilities (KSAs) required by employees to perform their job tasks effectively and efficiently. In this study training needs assessment is a

systematic process of evaluating and identifying gaps between the current knowledge, skills, and abilities (KSAs) of employees and the desired or required KSAs needed to fulfil organizational goals and objectives. It involves collecting, analysing, and interpreting data to determine specific areas where employees lack proficiency or competence in performing their job roles effectively. Training needs assessment aims to identify training priorities, develop targeted learning interventions, and allocate resources strategically to address the identified gaps and enhance employee performance and organizational effectiveness.

2.2.2 Budget Constraints

Budget constraint refers to the limitation imposed by a household's income and the prices of goods and services on the quantities of goods and services that the household can consume (Mankiw, & Taylor, 2014). However, Pindyck, & Rubinfeld, (2015) define budget constraints as microeconomics constraints the economic principle that describes the limit on the consumption bundles available to an individual or household due to limited income and the prices of goods and services in the market. In this study, budget constraints, in economics, refer to the limitations or restrictions faced by individuals, households, firms, or governments due to their finite financial resources. These constraints arise from the fact that economic agents have limited incomes or budgets that must be allocated among competing uses, such as consumption, investment, or saving.

2.2.3 Leadership Support

Leadership support refers to the actions and behaviours demonstrated by organizational leaders to endorse, promote, and facilitate the implementation of

initiatives, projects, or changes within the organization (Priyankara et al., 2018). However, Ribière, & Sitar, (2003) defined leadership support refers to the active involvement, commitment, and advocacy demonstrated by organizational leaders to create a supportive environment, build trust, and foster collaboration among employees to achieve shared goals. In this study, leadership support refers to the actions, behaviours, and attitudes demonstrated by organizational leaders to endorse, encourage, and facilitate the implementation of initiatives, projects, or changes within the organization. It involves providing guidance, resources, encouragement, and advocacy to empower employees and teams, foster a positive organizational culture, inspire employee engagement, and drive performance improvement. Leadership support plays a crucial role in creating a supportive environment, building trust, fostering collaboration, and promoting the success of organizational endeavours by aligning the efforts and energies of individuals and teams with strategic objectives and goals.

2.2.4 Employees Training and Development

The methodical process of improving employees' knowledge, skills, talents, and competencies through organized learning activities, including workshops, seminars, on-the-job training, and educational programs, is known as employee training and development (Rodriguez & Walters, 2017). Salas, Tannenbaum, Kraiger, and Smith-Jentsch (2012), however, disagree. Employee training and development pertains to the deliberate actions taken by companies to provide their workers with possibilities for career advancement, skill development, and ongoing education. The practice of methodically improving employees' knowledge, skills, talents, and competencies

through organized learning activities is referred to in this study as "employee training and development." Workshops, seminars, educational programs, on-the-job training, coaching, mentoring, and e-learning initiatives are a few examples of these activities. Enhancing employees' job-related performance, productivity, and effectiveness in their current jobs is the goal of training and development. It also helps employees get ready for future career growth and progression within the company. Building an informed and competent workforce, encouraging employee engagement and happiness, and accomplishing company goals and objectives all depend on this process.

2.2.5 Tanzania Public Sector

The Tanzania Public Sector refers to the various governmental organizations, agencies, and institutions that operate within the framework of the Tanzanian government to deliver public services and implement policies for the benefit of the Tanzanian population (Lufunyo, 2013). It encompasses a wide range of entities across different levels of government, including central government ministries, departments, and agencies, as well as local government authorities, such as regional and district councils.

2.3 Theoretical Literature Review

2.3.1 Human Capital Theory

The economist Becker (1964) was the main developer of the human capital hypothesis. Human capital theory states that putting money into employees' training and development increases their knowledge, skills, and capacities, which raises their

productivity and value to the company (Elnaga, & Imran, 2013). Human capital theory is predicated on the following fundamental premises: people are logical decision-makers who balance the advantages and disadvantages of investing in education, training, and skill development (De la Fuente & Ciccone, 2003). They make decisions to optimize their financial or long-term usefulness.

Secondly, the theory posits that individuals can enhance their human capital through investments in education, training, and skill acquisition (Becker, 2009). These investments are viewed as analogous to physical capital investments and are expected to yield returns in the form of higher earnings and improved job opportunities. Third, Human capital theory conceptualizes skills, knowledge, and abilities as productive assets that individuals possess and can deploy in the labour market (Crook, 2011). Just as physical capital (e.g., machinery, and equipment) enhances productivity in production processes, human capital enhances productivity in the performance of tasks and job roles. Investing in employees' education and training can increase their skills, knowledge, and abilities, which can boost productivity and organizational performance. This is the application of human capital theory. In the case of TANESCO headquarters, the company may invest in various training programs, workshops, and seminars to develop employees' technical competencies, safety skills, customer service skills, and managerial capabilities. These investments contribute to building a skilled workforce capable of effectively fulfilling the company's mission and objectives.

Human Capital Theory, introduced by Becker (1994), emphasizes the idea that investment in education and training improves workers' skills and productivity,

which is crucial for organizational success. In Tanzania's public sector, such as TANESCO headquarters, this theory is highly relevant as it supports the notion that employee training and development lead to improved service delivery and operational efficiency. By equipping employees with the necessary skills and knowledge, organizations like TANESCO can enhance their workforce's capacity to address complex challenges, adapt to technological changes, and meet strategic objectives. As a result, training and development initiatives are viewed as crucial investments that improve not only individual performance but also organizational outcomes.

In Tanzania's public sector, various factors impact employee training and development, such as budget constraints, leadership support, and access to appropriate training resources. Human Capital Theory suggests that overcoming these barriers requires viewing training as a long-term investment in the organization's human resources. At TANESCO, strategic training programs are essential in preparing employees to deal with the technical demands of energy production and distribution, ensuring that the workforce remains skilled and competitive. Research supports this by highlighting that public organizations with well-structured employee development programs tend to have higher levels of employee motivation, performance, and retention (Nyaga, 2022).

Moreover, the theory highlights the role of continuous learning and development in addressing skill gaps and fostering innovation within public institutions. In the case of TANESCO, constant technological advancements in energy management mean

that employees must be trained regularly to stay updated with industry standards. According to Brixiová et al. (2020), investing in human capital is crucial for developing economies like Tanzania, where public institutions play a key role in driving economic growth. Thus, the relevance of Human Capital Theory to TANESCO's training and development efforts is evident in its potential to transform the organization into a more effective and efficient entity through a well-equipped and knowledgeable workforce.

Human capital theory has strengths, Human capital theory emphasizes the importance of individual investment in education, training, and skills development. By highlighting the role of human capital as a driver of economic growth and productivity, the theory encourages individuals to make strategic decisions to enhance their skills and knowledge, leading to improved labour market outcomes and overall well-being.

While it suffers some weakness like Human capital theory tends to focus on individual-level factors while neglecting broader social and institutional factors that influence human capital formation and utilization. Factors such as socioeconomic status, discrimination, access to opportunities, and labour market structures can significantly impact individuals' ability to invest in and benefit from human capital. Therefore, in the context of Tanzania's public sectors, increased investment in training and development is expected to improve the quality of the workforce and contribute to organizational performance.

2.4 Empirical Literature Review

2.4.1 The Effect of Training Needs Assessment on Employee Training and Development at TANESCO

In Wan Ngah and Buniyamin's (2021) study, the training requirements analysis of TVET instructors was evaluated through curriculum development grounded in Malaysia's vocational ability structure. Many governmental agencies presently use the system, thus an online survey was done to find out how satisfied users were with it. To elucidate the impact of the aspects that have been identified as contributing to customer happiness, the survey results are evaluated. The outcome of the study could lead to greater use of TNA (Training Need Analysis) using CUDBAS in Malaysian government entities.

The favoured method for improving work performance among clinical nurses at University College Hospital (UCH), Ibadan, Oyo State, Southwestern Nigeria, was investigated by Adewole, Salawu, and Bello (2020). In the southwest Nigerian city of Ibadan, at University College Hospital (UCH), clinical nurses and midwives participated in this descriptive cross-sectional study. Stratified sampling was employed in the study participant selection process. Data were gathered using a 30-item World Health Organization (WHO) training assessment measure that was modified from the Hennessy Hicks Training Needs Analysis questionnaire. By the Hennessy Hicks criteria, data was examined. According to the respondents, they need training for each of the tasks and job subcategories listed. Training courses and programs were the respondents' favoured method for improving performance. This study demonstrated the value of assessing training needs to pinpoint areas where

nurses' training is lacking to have the greatest possible impact. The effectiveness of employee training needs assessment in Tanzanian public organizations was examined by Kazi (2020) using the Kinondoni Municipality as a case study. The primary methods of data collection in this study were questionnaires and interviews, using a cross-sectional survey design. The study concluded that TNA is highly significant in Kinondoni Municipality. All of the respondents did, however, concur that there are several issues with TNA implementation, particularly when it comes to staff development and training. These include a deficit in the budget, post-training staff turnover, and management-subordinate problems resulting from TNA.

2.4.2 The Effect of Budget Constraints on Employee Training and Development at TANESCO

Budget evaluation: training and its cost control for ECE educators in China was studied by Tang, Liu, and Liang (2022). The study is qualitative and has chosen a particular research philosophy, methodology, and sampling strategies. It outlines the obstacles to the training of successful educators and offers suitable accommodations for creating a plan that will work for them at a reasonable cost. Micro-training and online training are helpful tactics for controlling the cost of their training while preserving the calibre of the training program, according to a qualitative review. Government and municipal assistance are also essential contributing variables that guarantee the need for an efficient training system to bridge the training gaps for ECE instructors. Anaman (2023) conducted research at the local level in Ghana on the obstacles facing public institutions when implementing their budgets. The study gathered information on the difficulties in implementing the budget from one

hundred and thirty-five (135) employees of the municipal assembly using well-structured questionnaires. The study's descriptive findings indicate that the local assembly faces technological, cultural, and political obstacles when implementing the budget. The funding deficit made it impossible for staff to receive training. The study concludes that these issues can be resolved if local governments implement appropriate budget monitoring and review procedures, examine historical patterns and project them into the future to estimate revenue and expenses and develop thorough budgets to reduce the effects of implementation variances.

Factors influencing the efficacy of staff training programs in Tanzanian public organizations were examined by Kaaya and Shishiwa in 2021. 52 TANESCO Arusha employees made up the sample for this case study research design, which used a qualitative methodologies technique. According to the survey, most respondents were aware of TANESCO's current situation and the variables, such as the financial deficit, that affect staff training programs' efficacy. Similarly, the primary obstacles to TANESCO's staff training programs' success included the Annual Training Budget, official accountability, training motivation, clarity, resources, training needs assessments, and selection procedures.

2.4.3 The Effect of Leadership Support on Employee Training and Development at TANESCO

A framework of brand-centered training and development activities, transformational leadership, and employee brand support in higher education was researched by Sujchaphong, Nguyen, Melewar, Sujchaphong, and Chen (2020). Using information

gathered from 355 participants at 20 Thai business schools, the study uses structural equation modelling to evaluate a suggested research hypothesis. The results show a positive correlation between employee brand support, transformational leadership traits of the immediate leaders, internal brand communication efforts, and training and development activities that are centred around the brand. The relationship between internal brand communication activities and employee brand support is fully mediated by brand-centred training and development activities, as evidenced by the unexpected lack of significance in the direct relationship between the two.

In the instance of the North Wollo Zone, Amhara Region, Ethiopia, Dea and Tekalign (2022) investigated the practice of managerial leadership positions and its impact on developing human resource potential. Three methods were used to gather the data: interviews, questionnaires, and document reviews. Raw data are given meaning by the application of both descriptive research statistical tools, such as mean and percentage analysis procedures, and inferential statistical tools, such as correlation and regression. The study's conclusions supported the ineffectiveness of management leadership roles and the development of human resource capabilities that provide value. There is a substantial and favourable correlation between developing human resource capabilities and managerial leadership jobs. Leadership positions in management have a big impact on how well institutions can develop their human resource capabilities.

In a mixed-methods study conducted in Tanzania, Mwendwa, McAuliffe, Uduma, Masanja, and Mollel (2017) examined the effect of supportive supervision on the

implementation of HRM practices. This study used a mixed-methods methodology, examining supervisor perceptions 12 months after STEM implementation in three regions of Tanzania using focus group talks and the utilization of data from health institutions to evaluate changes in practice. The current study concentrated on supervisors' opinions on how supportive HRM processes were implemented and how this affected supervision practices. For example, the development of systemic record-keeping mechanisms, such as staff files and job descriptions, is the most noteworthy behavioural change linked to STEM. The implementation of these systems resulted in enhanced work conditions and supervisor-health provider communication. As a result, the monitoring process was made easier and less time was spent on staff supervision. Clear job definitions made it possible for employees to work more productively with human resources, and the installation of registers to track staff entry and exit from the building decreased the number of unexcused absences.

2.5 Research Gap

While some studies may have examined the perspectives of employees or management regarding training and development initiatives, there is a theoretical gap in understanding the viewpoints of other relevant stakeholders such as government agencies, regulatory bodies, unions, and local communities (Dea, Tekalign, 2022). Exploring how these stakeholders perceive and influence training and development practices in TANESCO could provide a more comprehensive understanding of the dynamics at play. Existing literature provides valuable insights into various factors influencing employee training and development globally and within developing countries (Sujchaphong, Nguyen, Melewar, Sujchaphong, & Chen, 2020). However,

the specific context of Tanzania's public sectors, and more specifically, the unique environment of TANESCO HQ, demands a nuanced understanding beyond what current research offers.

Most existing literature on employee training and development tends to offer generalized theories and frameworks that may not adequately capture the unique socio-cultural, economic, and political context of Tanzania, especially within its public sector organizations like TANESCO (Kaaya, & Shishiwa, 2021). A theoretical gap could exist in the exploration of how contextual factors specific to Tanzania and TANESCO HQ Dodoma.

2.6 Conceptual Framework

Independent Variables

Dependent Variable

Factors affecting T & D



Figure 2.1: Conceptual Framework

Source: Researcher, 2024

2.7 Theoretical Framework

2.7.1 The Effect of Training Needs Assessment on Employee Training and Development at TANESCO

The theoretical link between training needs assessment and training and development

underscores the importance of a systematic approach to identifying and addressing employee learning needs. By conducting regular needs assessments and using the findings to inform training initiatives, organizations can enhance the effectiveness of their training and development efforts, ultimately leading to improved employee performance, organizational outcomes, and competitive advantage.

H1: Training needs assessment is positively related to employees' training and development

2.7.2 The Effect of Budget Constraints on Employee Training and Development at TANESCO

Budget constraints limit the financial resources available for training and development initiatives at TANESCO. This may lead to a reduction in the overall investment allocated to training programs, including funding for courses, materials, trainers, and technology infrastructure needed to support effective learning experiences.

H2: Budget Constraints have a negative relationship with employees' training and development

2.7.3 The Effect of Leadership Support on Employee Training and Development at TANESCO

Leadership support sets the tone for fostering a culture of learning and development within TANESCO. When organizational leaders actively promote and endorse

training initiatives, employees perceive learning as a valued organizational priority, leading to increased engagement and participation in training programs.

H3: There is a positive relationship between leadership support on employee training and development

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter explains the methodology utilized to conduct this inquiry. This section covers the research design, methodology, study population, sample size, sampling tactics, techniques for collecting and analyzing data, and ethical considerations.

3.2 Research Philosophy

In this investigation, the positivist research philosophy was applied. Park, Konge, and Artino (2020) claim that positivism strongly emphasizes the use of statistical and quantitative techniques for the analysis of social phenomena. It is predicated on the idea that information may be generated objectively by formulating hypotheses, gathering data through standardized and repeatable methods, analyzing data statistically, and drawing conclusions that are backed up by facts. It helps ascertain the relationships between various parameters (Illing & Carter, 2018).

Positivism philosophy was selected for this study on factors affecting employees' training and development in Tanzania's public sectors, specifically at TANESCO Headquarters because it emphasizes objective analysis based on observable and measurable facts. Positivism supports the use of quantitative methods, which are suitable for identifying patterns, relationships, and causality among variables such as employee training and development. By applying this philosophy, the research aims to produce unbiased, replicable results, allowing for generalizations about the broader public sector in Tanzania. According to Saunders et al. (2019), positivism is

ideal for studies that prioritize empirical data and statistical analysis, aligning well to identify specific factors affecting training and development outcomes.

Moreover, positivism was chosen over other philosophies like interpretivism or constructivism because it provides a structured approach focused on hypothesis testing and deducing conclusions based on empirical evidence. While interpretivism is more suited for understanding subjective meanings and social interactions, this study requires a framework that can quantify the effects of various factors on employee development. Positivism allows for a clear focus on cause-and-effect relationships, as highlighted by Creswell and Creswell (2023), making it the most appropriate philosophical approach for evaluating factors impacting training programs in a public-sector context like TANESCO.

3.3 Research Approach

A research approach is a strategy and process that focuses on how social realities or phenomena might be investigated. It is comprised of a series of general assumptions and processes. There are three possible approaches: mixed, qualitative, and quantitative (Creswell, 2014). The investigator utilized quantitative techniques to address the problem and collect extensive data regarding it. Quantitative research generates numerical data that can be quantified and analyzed statistically (Mohajan, 2020). This allows researchers to measure relationships, trends, and patterns objectively, providing precise and reliable results. Moreover, Quantitative research often involves large sample sizes, making it possible to generalize findings to larger populations (Schreier, 2018). This allows researchers to draw broader conclusions

and make predictions about phenomena beyond the specific study sample. Lastly, Quantitative research employs statistical techniques to analyze data, such as regression analysis, correlation, and hypothesis testing (Mohajan, 2020). These methods provide rigorous and systematic ways to examine relationships between variables, test hypotheses, and draw valid conclusions.

3.4 Research Design

A research design, according to Kothari (2014), is the structure and strategy of an investigation made to address research issues. This study's research design was explanatory. The researcher was able to conduct a thorough examination thanks to this design. Because the case study design works effectively for current events when the relevant behaviour cannot be operated, it enables the researcher to investigate the situation as it is (Creswell, 2014). Explanatory research aims to uncover causal relationships between variables. By identifying cause-and-effect relationships, researchers can better understand why certain phenomena occur and how they are interconnected (Geels, 2022). Explanatory research is often used to test hypotheses or research questions that propose causal relationships between variables (Grace, & Irvine, 2020). Through controlled experiments or observational studies, researchers can assess the impact of independent variables on dependent variables, helping to confirm or refute theoretical propositions. Lastly, Explanatory research design allows researchers to predict the outcomes or effects of certain variables based on their relationships with other variables (Haile, 2023). This predictive power is valuable for making informed decisions, developing interventions, or planning future actions based on anticipated outcomes.

3.5 Area of the Study

TANESCO, Tanzania Electric Supply Company, was chosen as the area of study for factors affecting employees' training and development in the public sector due to its critical role in the country's energy infrastructure. As the sole public utility company responsible for electricity generation, transmission, and distribution, TANESCO is one of Tanzania's largest employers, with a diverse workforce that requires continuous training and development to meet the growing demands of the energy sector. According to the Tanzania National Energy Strategy (2023), the country's energy needs are expanding rapidly, necessitating a well-trained workforce capable of managing complex energy systems. TANESCO's unique position as a public entity serving a critical national function makes it an ideal case for studying employee development, as the findings can be applied to other key public sectors in Tanzania.

Additionally, TANESCO operates in a highly technical and specialized industry that requires constant updates in skills and knowledge due to technological advancements. The energy sector is experiencing rapid changes globally, with shifts toward renewable energy, automation, and digitalization, all of which require TANESCO employees to continuously upgrade their skills. This makes TANESCO a unique case for examining the effectiveness of training and development programs in a high-tech, public-sector environment. According to a report by the African Development Bank (2023), energy companies across Africa, including TANESCO, face significant challenges in workforce development, highlighting the importance of

targeted training initiatives that keep employees at the forefront of technological innovation.

Furthermore, TANESCO's organizational structure and public sector governance present specific challenges in human resource development that make it a unique case study. Being a government-owned enterprise, TANESCO operates under public sector constraints such as limited budgets, bureaucratic procedures, and political influences that can impact the design and implementation of training programs. Studying TANESCO provides valuable insights into how public sector organizations in Tanzania, and other African countries, can overcome these obstacles to develop effective training programs for their employees. The World Bank (2024) notes that public-sector enterprises like TANESCO face distinct challenges in human capital development, making it a pertinent case for understanding how these factors affect employee training and development in Tanzania's broader public sector.

3.6 Population of the Study

The complete group of people or objects that the researcher is interested in examining and making conclusions about is referred to as the study's population (Hancock, Algozzine, & Lim, 2021). The results of the study are meant to apply to this larger group. According to Wagenaar et al. (2018), the population acts as the sampling frame from which the sample is taken. To guarantee that the study sample is representative of the population of interest, it serves as the foundation for the selection of participants or other components. 285 TANESCO workers were used in this investigation.

Table 3.1: Unity of Inquiry

| S/N | Department | Population |
|--------------|-------------------------------------|-------------------|
| 1. | Directorate of Human Resource | 35 |
| 2. | Directorate of maintenance | 150 |
| 3. | Directorate of Customer Service | 60 |
| 4. | Directorate of finance and accounts | 40 |
| Total | | 285 |

Source: TANESCO HR DEPT, 2024

According to Maxfield and Babbie (2014), a population is a collection of distinct events or things that have a common observable property. To evaluate the impact of on-the-job training on employee performance in a public sector organization—specifically, at the TANESCO headquarters in Dar es Salaam—all staff members participated in this study.

3.7 Sample Size and Sampling Techniques

3.7.1 Sample Size

The number of people or components included in a study's sample is referred to as the sample size in research. Assuring the validity, generalizability, and dependability of study findings requires careful consideration of sample size (Lakens, 2022). The sample size needs to be adequate to provide an accurate representation of the target population. An increased sample size improves the study's external validity by raising the possibility that the sample accurately represents the features of the population. Sufficient statistical power, or a study's capacity to identify real effects or associations if they exist, depends on having an adequate sample size (Button, Ioannidis, Mokrysz, Nosek, Flint, Robinson, & Munafò, 2013). Low statistical power resulting from insufficient sample size raises the possibility of Type II errors (false negatives).

Table 3.2: The Sampling Distribution

| S/N | Department | Population | Sample Size |
|--------------|-------------------------------------|------------|-------------|
| 1. | Directorate of Human Resource | 35 | 16 |
| 2. | Directorate of maintenance | 150 | 39 |
| 3. | Directorate of Customer Service | 60 | 23 |
| 4. | Directorate of finance and accounts | 40 | 12 |
| Total | | 285 | 164 |

Source: Researcher Construct, 2024

Statistically, the following Taro Yamane's (1967) formula was used to determine the

study sample size as shown below:
$$n = \frac{N}{1 + Ne^2}$$

Where **n** is the sample size, **N** is the targeted population size and **e** is the margin of error (0.05). The researcher used a confidence level of 95%, to decide on the sample size to be used in this study. $e = 1 - 0.95$; Therefore, $e = 0.05$ and $N = 285$

$$N = \frac{285}{1 + 285(0.05)^2}$$

Also, the sample for each category was obtained as follows

$$\text{Sample size of Directorate of Human Resource} \quad n = \frac{35 \times 164}{285} = 20$$

$$\text{Sample size of Directorate of maintenance} \quad n = \frac{150 \times 164}{285} = 86$$

$$\text{Sample size of Directorate of Customer Service} \quad n = \frac{60 \times 164}{285} = 35$$

$$\text{A sample size of Directorate of Finance and accounts} \quad n = \frac{40 \times 164}{285} = 23$$

3.7.2 Sampling Technique

To draw conclusions or carry out analysis, a sampling strategy is a way to choose a subset of people, objects, or data points from a broader population or dataset. Because sampling enables researchers to conclude a group without having to examine every member of that community, it is crucial to research and statistics. The two primary groups of sampling approaches are non-probability and probability. The probability sampling method of stratified sampling was applied in this investigation. A probability sampling technique called stratified sampling divides the population into discrete subgroups or strata according to a single or a combination of criteria (e.g., age, gender, economic level). The strata in this study comprised a variety of TANESCO employees.

Using stratified sampling to study the factors affecting employee training and development at the TANESCO headquarters in Tanzania's public sector is beneficial for several reasons. The employees at TANESCO headquarters are likely to vary widely in terms of their roles, departments, educational backgrounds, years of experience, and possibly even geographic origins. Stratified sampling ensures that all these diverse groups are adequately represented in the sample, allowing for a comprehensive analysis of training and development factors across different segments (Tipton, 2013).

Secondly, stratified sampling guarantees that each subgroup (e.g., different departments, levels of seniority, or job roles) within the TANESCO headquarters is proportionately represented. This leads to more accurate and reliable insights into

how training and development needs and outcomes may vary across these different groups.

Third, by ensuring that the sample includes representative numbers from each stratum, stratified sampling allows for meaningful comparisons between groups (Tipton, et al.,2014). For instance, it would be possible to compare training needs and development outcomes between technical staff and administrative staff, or between junior employees and senior management.

Lastly, by using stratified sampling, the risk of sampling bias is reduced. This is particularly important in organizational studies where certain groups might be underrepresented or overrepresented if random sampling were used (Mujere, 2016). Stratified sampling ensures that each subgroup's perspectives are included, providing a more balanced and fair assessment of the training and development environment.

3.8 Data Collection

To address research questions, test hypotheses, and assess results, data collection in research methodology refers to the methodical process of obtaining and measuring information on variables of interest in a consistent and organized manner (Pandey, & Pandey, 2021). Any research study must include a data collection method because it guarantees that the information acquired is genuine, accurate, and reliable and provides a solid basis for analysis and interpretation. This investigation used solely primary data. Original, first-hand information gathered by the researcher directly for a particular goal or research topic is referred to as primary data (Ajayi, 2017). This

type of data is gathered directly from the source or the subjects of interest and is specifically tailored to address the research objectives or questions at hand. To facilitate this, structured questionnaires were used as a tool for data collection.

3.8.1 Structured Questionnaire

Kothari (2014) stated that Questionnaires are a tool employed to reduce bias and give the respondents convenient time. Surveys targeting 164 respondents distributed questionnaires based on rank, allowing for a variety of answers depending on experience and occupation, especially for open-ended questions that need explanation. Structured questionnaires ensure uniformity in data collection (Young, 2015). All respondents receive the same set of questions in the same order, eliminating variability in the way questions are presented. This consistency enhances the reliability of the data. The questions in structured questionnaires are carefully designed and standardized. This means that each respondent interprets and answers the questions in the same way, reducing the chances of misinterpretation or bias in responses. Structured questionnaires are often designed to generate quantifiable data, which can be easily analysed using statistical methods. This facilitates the identification of patterns, trends, and relationships within the data (Östlund, Kidd, Wengström, & Rowa-Dewar, 2011).

3.9 Data Process

Data processing in research involves several steps to transform raw data into meaningful and actionable insights.

3.9.1 Pilot Study

To determine how familiar, the respondents were with the scales, pilot research was carried out. Ten officers from the TANESCO office were chosen to take part in the pilot project. However, they were not involved in the actual study. Each person received a questionnaire to complete. Following that, each completed survey was examined and confirmed. Data were entered into SPSS and run to validate preliminary findings. Outcomes demonstrated that the tool was suitable. The scales were verified. There were no errors or irregularities after the pilot research that were found.

3.9.2 Data Entry

Once data is collected, it needs to be entered into a suitable format for analysis. This may involve manual entry of paper-based surveys into electronic databases or automated data capture from digital sources.

3.9.3 Data Cleaning

Data cleaning involves identifying and correcting errors, inconsistencies, or missing values in the dataset. Common tasks include removing duplicates, correcting spelling mistakes, and imputing missing data using appropriate methods (Chu, Ilyas, Krishnan, & Wang, 2016). Data cleaning in quantitative research is important because raw data often contains errors, such as incorrect entries, missing values, or duplicates (Gudivada, Apon, & Ding, 2017). Cleaning the data helps ensure that the analysis is based on accurate and reliable information. This enhances the validity of the research findings.

3.9.4 Data Coding

Data coding involves categorizing and labelling variables to facilitate analysis (St. Pierre, & Jackson, 2014). Qualitative data analysis after coding. This may include assigning numerical codes to categorical variables or grouping continuous variables into meaningful categories.

3.9.5 Data transformation

The process of transforming raw data into a format that can be analyzed is known as data transformation (Manikandan, 2010). This could involve combining data, standardizing units of measurement, or applying mathematical functions (such as logarithmic or exponential transformations) to change variables.

3.9.6 Error Check

Error checking in research is the methodical process of finding, locating, and fixing mistakes or discrepancies in data, analysis, or interpretation. Ensuring the correctness, reliability, and validity of study findings is an essential step. From data collection to final analysis and reporting, mistakes might happen at any point in the study process (Wang & Zhong, 2022).

Every piece of data provided by survey participants was checked for accuracy. A second, better-educated person verified the accuracy of the questionnaires and the data set to make sure all the data was collected correctly. Any mistakes found were corrected. More descriptive statistical error testing was done to find items that were outside of the scale response range.

3.9.7 Missing Variable

A missing variable refers to a factor or attribute that is not included or measured in the study, but which may have a significant impact on the phenomenon being studied. This omission can occur for various reasons, such as oversight during study design, limitations in data collection methods, or assumptions made about the irrelevance of certain variables (Zhao & Long, 2017). The missing data is located using the SPSS Missing Value Analysis (MVA). Excel was used to finish the imputation since the scales of the independent and dependent variables should both be less than 5%; if they are higher, this suggests random missing data.

3.10 Data Analysis

Multiple regression analysis and descriptive statistics were employed to determine the relationship between the variables. Because of this, regression analysis was used to explain the current relationship between the study variables. Numerous regressions, a statistical technique, were used to investigate one dependent variable and numerous independent variables (Peersman, 2014). Multiple regression analysis combines independent variables with known values to predict the final result of the single dependent value (McLeod, 2013).

3.11 Regression Model

Therefore, the model guiding the analysis is illustrated as follows.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Whereby;

$$Y = \text{Training and Development}$$

β_0 = Constant

β_1 = Training Needs Assessment Coefficient

β_2 = Budget Constraints Coefficient

β_3 = Leadership Support Coefficient

X_1 = Training needs assessment

X_2 = Budget Constraint

X_3 = Leadership Constraints

e = Error Term

3.12 Regression Assumptions

A simple regression equation often takes into account the assumptions of ordinary least square (OLS) regression. To make sure the data satisfied the standards for analysis and the objectives of the regression analysis, the main presumptions were examined. We looked at the five basic theories of the Ordinary Least Square (Green, 2008; Park, 2011). Multicollinearity, homoscedasticity, outlier, linearity, and normality are a few of them.

3.12.1 Normality Test

Regression residuals, or the disparities between observed and predicted values, must have a normally distributed distribution for the linear regression model to work. Use the histogram to verify that everything is normal. The residuals ought to have a normal distribution with a mean near 0 and an SD near 1, appearing as a bell-shaped distribution. For appropriate statistical result interpretation, data normalcy is frequently required. The assumption of normalcy, for instance, provides the

foundation for p-value calculations, hypothesis testing, and confidence intervals. Visual inspection of a histogram or Q-Q plot (quantile-quantile plot) of the data is a popular technique for determining if the data is normal. According to White, Redford, and Macdonald (2019), normalcy is suggested if the data distribution closely approaches a bell-shaped curve or falls along a straight line in the Q-Q plot.

3.12.2 Linearity Test

Regression analysis uses a linearity test to determine whether there is a linear relationship between the independent variable or variables and the dependent variable (Alita, Putra, & Darwis, 2021). For every increment of the predictor, the mean value of the outcome variables exhibits a straight-line trend. P-P graphs, which display the points where they fall along the diagonal line, validate this assumption. Linearity guarantees that, for every unit change in the independent variable, the coefficients of the independent variables reflect the change in the dependent variable. Regression coefficient interpretation might be made more difficult by non-linear correlations (Bangdiwala, 2018).

3.12.3 Homoscedasticity Test

The variance of the error component in a regression is assumed to be constant across all potential values of the independent variable. It is necessary to determine if points are distributed equally and in a rectangular pattern across all values of the independent variables by plotting the standardized residuals (also known as scatter plots) against the anticipated values. The data is homoscedastic. A robust standard error may be employed to manage the heteroscedasticity if the scatter plots display a cone-shaped pattern (Rosopa, Schaffer, & Schroeder, 2013).

3.12.4 Multicollinearity Test

The assumptions underlying multiple regressions are that there is no substantial correlation between the independent variables and that the data are not multicollinear. To look for multicollinearity, the Variance Inflation Factor (VIF) values were utilized. Using a VIF mean cuff threshold of 5 to eliminate the causes of the multicollinearity danger is one possible remedy (Craney & Surles, 2002).

3.13 Validity

Validity in research refers to the extent to which a study accurately reflects or assesses the specific concept or variables it is intended to measure (Cohen, Manion, & Morrison, 2017). The questionnaire can measure what you intend it to measure (Saunders et al., 2019). In this research, as recommended also by Leavy (2017); the researcher discussed the research instruments with supervisors to judge the appropriateness of language and assumptions to establish content validity (adequacy in coverage), criterion-related validity (make accurate predictions) and construct validity (measure what was intended). Validity was also tested statistically through regression and correlation between variables.

3.14 Reliability

According to Saunders et al. (2019), it concerns whether the questionnaire will yield consistent results at various times and under various circumstances. Internal consistency was calculated in this study using Cronbach's alpha. With the use of a selection of questions incorporated into a scale to test a certain notion, this tool assesses the consistency of responses. In this study, Cronbach's alpha of 0.70 was

taken as the cut-off, by the common rule of thumb that states that Cronbach's alpha of 0.70 and above is good, 0.80 and above is better, and 0.90 and above is best.

Table 3.3: Reliability Test Results

| S/N | Variable | Number of Items | Cronbach's Alpha Results |
|-----|----------|-----------------|--------------------------|
| 1 | TNA | 11 | .951 |
| 2 | BDGET | 10 | .726 |
| 3 | LS | 10 | .834 |
| 4 | TD | 10 | .968 |

Note: TNA= Training Needs Assessment, BUDGT = Budget Deficit, Leadership

Support. TD = Training and Development

Source: Data Analysis, 2024

3.15 Ethical Considerations

Before including participants in the study, it is my responsibility as a researcher to get their voluntary and informed consent (Xu, et al., 2020). Participants should have the option to ask questions and revoke their consent at any time, and they should be fully informed about the goal, methods, risks, rewards, and confidentiality of the study.

I do respect study participants' autonomy, privacy, and dignity in my capacity as a researcher (Petrova, Dewing, & Camilleri, 2016). This entails safeguarding participants against injury, refraining from pressure or undue influence, and ensuring the privacy of their answers and personal data. Additionally, researchers should accurately describe their methodology, findings, and interpretations while conducting their work with honesty, integrity, and transparency. This includes disclosing any

conflicts of interest, adhering to professional standards and guidelines, and avoiding fabrication, falsification, or plagiarism in research practices. Lastly, a researcher should ensure the confidentiality and security of research data, protecting participants' privacy and anonymity. This includes implementing appropriate data management practices, obtaining necessary permissions for data use and sharing, and securely storing and disposing of data.

CHAPTER FOUR

RESEARCH FINDINGS ANALYSIS AND DISCUSSION

4.1 Overview

The findings and comments from the evaluation of the variables influencing workers' training and development are presented in this chapter to the public at TANESCO Headquarters. Age, gender, education level, and experience are described in the demographic distribution. Regression analysis, correlation analysis, and descriptive statistics come next. The discussion of the results comes last.

4.2 Demographic Characteristics of the Respondents

This section included an analysis and presentation of gender, age, education, and experience. The features of the population being studied are revealed by demographic statistics. This covers elements including experience, education level, gender, and age. Demographic information was gathered and analyzed to assist in understanding the population's makeup and how various groups might experience or react to surveys that evaluated the elements influencing staff training and development at TANESCO Headquarters.

4.2.1 Gender Characteristics of the Respondents

Table 4.1 shows the gender distribution of the respondents from TANESCO. The sample includes a relatively balanced representation of genders, with males constituting 51.1% and females constituting 48.9% of the respondents. This near-equal distribution suggests that the sample does not significantly favour one gender over the other. With a total of 174 respondents, the sample size is adequate for

concluding the gender distribution within the studied population. The difference in the number of male and female respondents is minimal (only 4 more males than females). Therefore, the balanced gender distribution allows for meaningful comparisons between males and females. If the study aims to explore gender-based differences or similarities, this balanced representation provides a solid foundation for such analyses.

4.2.2 Age Characteristics of the Respondents

Table 4.1 presents the age distribution of the respondents. The largest age group in the sample is the 36-45 years group, comprising 35.1% of the respondents. The second largest group is the 26-35 years group, making up 32.8% of the respondents. The smallest age group is the 18-25 years group, with 9.8% of the respondents. The majority of the respondents (67.9%) fall within the age range of 26-45 years. This indicates a predominance of middle-aged individuals in the sample. Therefore, the data shows a significant skew towards respondents in the 26-45 years age range. This could suggest that the study is most relevant to middle-aged individuals or that this demographic is more accessible or willing to participate in the study.

4.2.3 Education Level Characteristics of the Respondents

Table 4.1 shows the education level of the respondents. The largest education level in the sample is the Bachelor's degree, with 40.8% of the respondents. The second largest group is the Diploma holders, making up 24.1% of the respondents. The smallest education level group is the PhD holders, with 6.3% of the respondents. A significant portion of the respondents (68.4%) have obtained a Bachelor's degree or

higher (Bachelor's, Master's, or PhD). Therefore, The education distribution in this dataset shows a predominant representation of respondents with Bachelor's degrees or higher, indicating a highly educated sample.

4.2.4 Working Experience Characteristics of the Respondents

Table 4.1 presents the working experience of respondents at TANESCO. The largest experience group in the sample is the 11-15 years group, comprising 28.2% of the respondents. The second largest group is the 16-20 years group, making up 25.3% of the respondents. The smallest experience group is the Below 5 years group, with 10.3% of the respondents. A significant portion of respondents (53.5%) have between 11 and 20 years of experience, indicating a substantial representation of experienced individuals.

Table 4.1: Demographic Statistics Results

| S/N | | Frequency | % |
|-----|-------------------|-----------|------|
| 1 | GENDER | | |
| | Male | 89 | 51.1 |
| | Female | 85 | 48.9 |
| 2 | AGE | | |
| | 18-25 years | 17 | 9.8 |
| | 26-35 years | 57 | 32.8 |
| | 36-45 years | 61 | 35.1 |
| | 46-55 years | 18 | 10.3 |
| | Above 55 | 21 | 12.1 |
| 3 | EDUCATION | | |
| | Certificate | 13 | 7.5 |
| | Diploma | 42 | 24.1 |
| | Bachelor | 71 | 40.8 |
| | Masters | 37 | 21.3 |
| | PhD | 11 | 6.3 |
| 4 | Experience | | |
| | Below 5 | 18 | 10.3 |
| | 6- 10 | 25 | 14.4 |
| | 11- 15 | 49 | 28.2 |
| | 16- 20 | 44 | 25.3 |
| | 21 - 25 | 38 | 21.8 |

Source: Data Analysis (2024)

4.3 Descriptive Statistics Results

The descriptive statistics were analyzed. Independent variables are training needs assessment, budget constraints and Leadership Support. While the dependent variable is training and development. Minimum, maximum, means and standard deviations were computed.

4.3.1 The Effect of Training Needs Assessment Descriptive Statistics Results

Table 4.2 illustrates how the dataset offers descriptive statistics for different facets of TANESCO's Training Needs Assessment (TNA) procedure. For every statement, the essential metrics are the minimum (Min), maximum (Max), mean, and standard

deviation (Std. Dev). The organization that implemented training programs based on TNA findings effectively received the highest score ($M = 3.5862$, $SD = 1.70380$) on the training needs assessment variable, and there are mechanisms in place to evaluate the effectiveness of training interventions post-implementation ($M = 3.5747$, $SD = 1.27340$). The training needs assessment variable had the lowest score ($M = 2.3333$, $SD = 1.34866$) for TNA findings are effectively utilized in shaping training and development initiatives. This was followed by the lowest score ($M = 2.6034$, $SD = 1.26682$) for having mechanisms in place for employees to provide feedback on training needs assessment processes. Consequently, the comparatively high mean ratings (3.5747 and 3.5862) show favourable opinions regarding the application of training initiatives based on TNA results and the assessment of their efficacy. This indicates that training programs are generally well-received and effectively evaluated, which is a positive point for the firm.

Table 4.2: The Effect of Training Needs Assessment Descriptive Statistics**Results**

| | Min | Max | Mean | Std. Dev |
|---|------------|------------|-------------|-----------------|
| TANESCO provides adequate resources for conducting Training Needs Analysis | 1.00 | 5.00 | 2.8966 | 1.29503 |
| Leadership actively promotes and supports the TNA process | 1.00 | 5.00 | 2.8506 | 1.10206 |
| TNA findings are effectively utilized in shaping training and development initiative | 1.00 | 5.00 | 2.3333 | 1.34866 |
| Employees are actively involved in identifying their own training needs | 1.00 | 5.00 | 3.2816 | 1.08910 |
| There are mechanisms in place for employees to provide feedback on training needs assessment processes | 1.00 | 5.00 | 2.6034 | 1.26682 |
| The organization utilizes a variety of methods (surveys, interviews, performance evaluations) to collect data for TNA. | 1.00 | 5.00 | 2.8103 | 1.31409 |
| The data collection methods used are effective in capturing diverse training needs across different departments or job roles. | 1.00 | 5.00 | 3.2816 | 1.08910 |
| There are dedicated personnel responsible for analyzing TNA data. | 1.00 | 5.00 | 3.3621 | 1.10749 |
| TNA results are interpreted accurately to identify priority training areas. | 1.00 | 5.00 | 3.4828 | 1.21038 |
| The organization effectively implements training programs based on TNA findings. | 1.00 | 5.00 | 3.5747 | 1.27340 |
| There are mechanisms in place to evaluate the effectiveness of training interventions post-implementation. | 1.00 | 5.00 | 3.5862 | 1.70380 |

Source: Field Data, 2024

4.3.2 The Effect of Budget Constraints Descriptive Statistics Results

Table 4.3 shows the effect of the budget constraints descriptive statistics results. The descriptive statistics provided give insight into how budget constraints impact various aspects of training and development within TANESCO (Tanzania Electric Supply Company Limited). The variables measured include the sufficiency of budget allocation for training, the effect of budget constraints on training quality and variety,

and the overall impact on employee motivation and organizational goals. Each statement was rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Budget constraints negatively impact employees' opportunities for skill enhancement and career development received the highest score ($M = 4.3218$, $SD = 1.26303$) followed by there are strategies in place to prioritize training initiatives that align with organizational objectives despite budget constraints ($M = 4.1092$, $SD = 1.05053$). TANESCO does allocate sufficient budget for training and development initiatives received the lowest score on budget constraints ($M = 2.5517$, $SD = .96480$) followed by Budget constraints limiting the variety of training programs offered to employees ($M = 2.7759$, $SD = 1.24059$). There is a consensus that the budget for training and development is insufficient. Budget constraints have a significant negative impact on the quality and accessibility of training programs and resources.

Table 4.3: The Effect of Budget Constraints Descriptive Statistics Results

| | Min | Max | Mean | Std. Devi |
|--|------------|------------|-------------|------------------|
| TANESCO does allocate sufficient budget for training and development initiatives. | 1.00 | 5.00 | 2.5517 | .96480 |
| Budget constraints have led to a reduction in the overall investment in training programs. | 1.00 | 5.00 | 3.2529 | 1.17013 |
| Budget constraints limit the variety of training programs offered to employees. | 1.00 | 5.00 | 2.7759 | 1.24059 |
| The quality of training programs has been compromised due to budget constraints. | 1.00 | 5.00 | 3.4828 | 1.21038 |
| Employees face challenges in accessing necessary training resources (e.g., materials, tools, technology) due to budget constraints. | 1.00 | 5.00 | 3.9770 | 1.36409 |
| Budget constraints hinder the availability of training facilities and equipment necessary for effective learning experiences. | 1.00 | 5.00 | 2.5862 | 1.24512 |
| Budget constraints negatively impact employees' opportunities for skill enhancement and career development. | 1.00 | 5.00 | 4.3218 | 1.26303 |
| Employees feel demotivated or disengaged due to limited investment in training and development. | 1.00 | 5.00 | 3.1667 | 1.58418 |
| Budget constraints have affected the organization's ability to align training initiatives with strategic goals and priorities. | 1.00 | 5.00 | 3.9770 | 1.36409 |
| There are strategies in place to prioritize training initiatives that align with organizational objectives despite budget constraints. | 1.00 | 5.00 | 4.1092 | 1.05053 |

Source: Field Data, 2024

4.3.3 The Effect of Leadership Support Descriptive Statistics Results

The impact of the leadership support descriptive statistics variable is displayed in Table 4.4. The descriptive statistics that are supplied shed light on how TANESCO leaders see and support programs related to training and development. The ratings for each statement ranged from 1 (strongly disagree) to 5 (strongly agree), representing the opinions of the workforce regarding leadership styles and organizational support for learning and growth. The highest score went to leaders who actively participate in

training events and show dedication to their professional growth ($M = 3.5747$, $SD = 1.27340$), and they are followed by leaders who set a good example for ongoing learning and skill improvement ($M = 3.5862$, $SD = 1.70380$). The leadership support variable yielded the lowest score for leaders who provide constructive feedback and guidance to employees regarding their training and development goals ($M = 2.7103$, $SD = 1.31409$), followed by leaders who reward and recognize employees who actively participate in training and development activities ($M = 2.5517$, $SD = .96480$). Therefore, leaders are perceived to prioritize resource allocation for training and development, actively participate in training activities, and serve as role models for continuous learning.

Table 4.4: The Effect of Leadership Support Descriptive Statistics Results

| | Min | Max | Mean | Std. Dev |
|--|------------|------------|-------------|-----------------|
| TANESCO leaders communicate the importance of training and development initiatives effectively. | 1.00 | 5.00 | 2.8103 | 1.31409 |
| Leaders actively endorse and support employees' participation in training programs. | 1.00 | 5.00 | 3.2816 | 1.08910 |
| Organizational leaders allocate sufficient resources (e.g., budget, time, personnel) to support training and development activities. | 1.00 | 5.00 | 3.3621 | 1.10749 |
| Leaders prioritize investment in training and development initiatives, even during periods of budget constraints. | 1.00 | 5.00 | 3.4828 | 1.21038 |
| Leaders actively participate in training activities and demonstrate a commitment to their professional development. | 1.00 | 5.00 | 3.5747 | 1.27340 |
| Leaders serve as positive role models for continuous learning and skill enhancement. | 1.00 | 5.00 | 3.5862 | 1.70380 |
| Leaders recognize and reward employees who actively engage in training and development activities. | 1.00 | 5.00 | 2.5517 | .96480 |
| Employees perceive that their participation in training programs is valued and acknowledged by organizational leaders. | 1.00 | 5.00 | 3.2529 | 1.17013 |
| Leaders provide constructive feedback and guidance to employees regarding their training and development goals. | 1.00 | 5.00 | 2.7103 | 1.31409 |
| Employees feel supported by leaders in identifying and addressing their developmental needs. | 1.00 | 5.00 | 3.2816 | 1.08910 |

Source: Field Data, 2024

4.3.4 Employees Training and Development Descriptive Statistics Results

With an emphasis on the perceived efficacy, relevance, support, and results of training programs, Table 4.5 presents descriptive statistics of several TANESCO training and development-related topics. The ratings for each statement ranged from 1 (strongly disagree) to 5 (strongly agree), representing the opinions of the workforce regarding the organization's training and development procedures. Training and Development: Training programs that use interactive and engaging activities to

improve learning outcomes obtained the highest score ($M = 3.9770$, $SD = 1.36409$), followed by improvements in work performance and skill development ($M = 3.5862$, $SD = 1.70380$). Employees who have access to necessary training resources (e.g., materials, tools, technology) to support their learning received the lowest score on training and development dependent variable ($M = 2.5517$, $SD = .96480$) followed by feedback mechanisms are in place to assess the effectiveness of training programs and instructors ($M = 2.7759$, $SD = 1.24059$). Therefore, positive perceptions regarding the relevance of training programs, the effectiveness of delivery methods, and the impact on job performance and skills development.

Table 4.5: Training and Development – Dependent Variable

| | Min | Max | Mean | Std. Dev |
|---|------------|------------|-------------|-----------------|
| TANESCO offers a variety of training programs to employees. | 1.00 | 5.00 | 3.3621 | 1.10749 |
| Training programs offered by TANESCO are relevant to the job role and career development needs of its employees | 1.00 | 5.00 | 3.4828 | 1.21038 |
| The delivery methods used in training programs (e.g., workshops, online courses, on-the-job training) are effective in facilitating learning. | 1.00 | 5.00 | 3.5747 | 1.27340 |
| Training programs incorporate interactive and engaging activities to enhance learning outcomes. | 1.00 | 5.00 | 3.5862 | 1.70380 |
| Employees have access to necessary training resources (e.g., materials, tools, technology) to support their learning. | 1.00 | 5.00 | 2.5517 | .96480 |
| The organization provides adequate support for employees' participation in training programs (e.g., time off, and financial assistance). | 1.00 | 5.00 | 3.2529 | 1.17013 |
| Feedback mechanisms are in place to assess the effectiveness of training programs and instructors. | 1.00 | 5.00 | 2.7759 | 1.24059 |
| Employees receive constructive feedback on their performance and progress during and after training programs. | 1.00 | 5.00 | 3.4828 | 1.21038 |
| training and Development Improve job performance and skills development. | 1.00 | 5.00 | 3.9770 | 1.36409 |
| There are career advancement opportunities within TANESCO. | 1.00 | 5.00 | 2.5862 | 1.24512 |

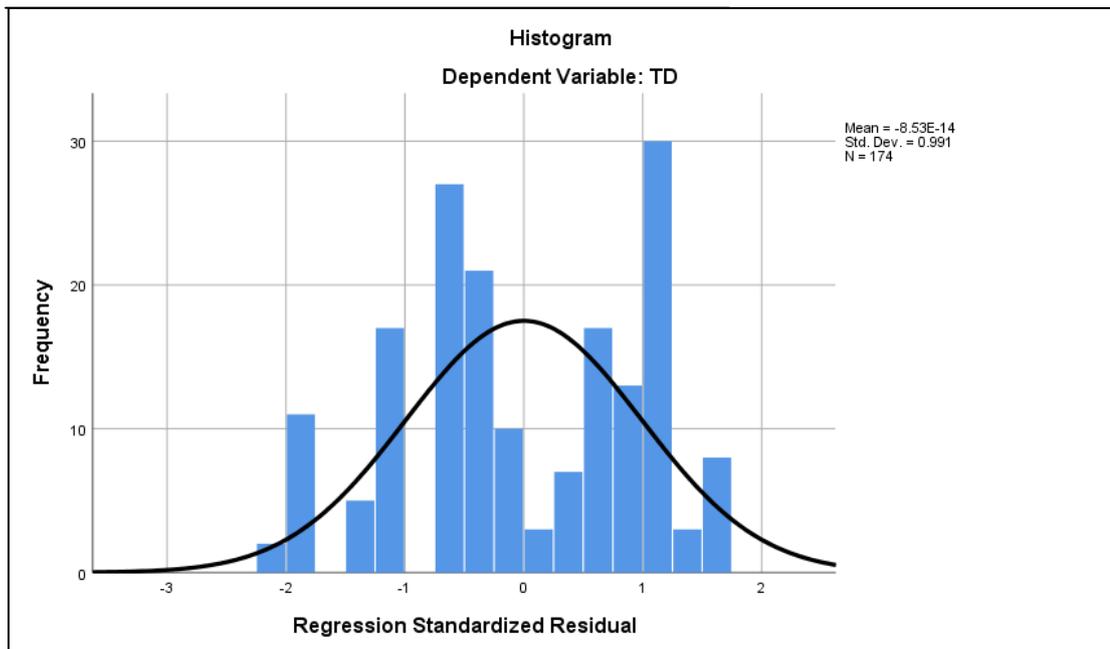
Source: Field Data, 2024

4.4 Regression Assumptions Test Results

4.4.1 Normality Test Results

The results of the normalcy assumption are shown in Figure 4.1. The histogram's form can provide information about how the data are distributed. A symmetrical bell-shaped curve, for instance, indicates a normal distribution. If you want to know if your data is bell-shaped or has a normal distribution, a normality test can help. Many statistical tests must meet this normalcy assumption to be considered valid.

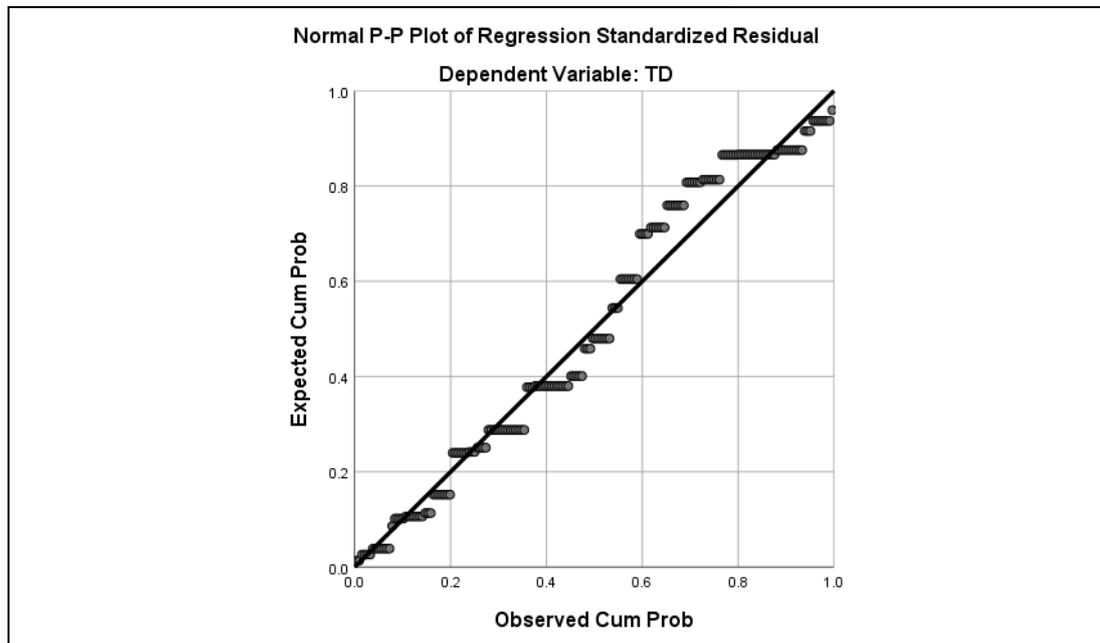
The distribution of the residuals is shown by the bell-shaped curve on the histogram (figure 4.1). A normal distribution is shown by the residuals' proximity to zero in both mean and standard deviation. The histogram (Figure 4.1), which indicates that all residual values fall within the three boundaries, demonstrates that there are no outliers. According to Tabachnick and Fidell (2007), a result outside of the $|3|$ criterion is anomalous.

Figure 4.1: Histogram

Source: Data Analysis, 2024

4.4.2 Linearity Test Results

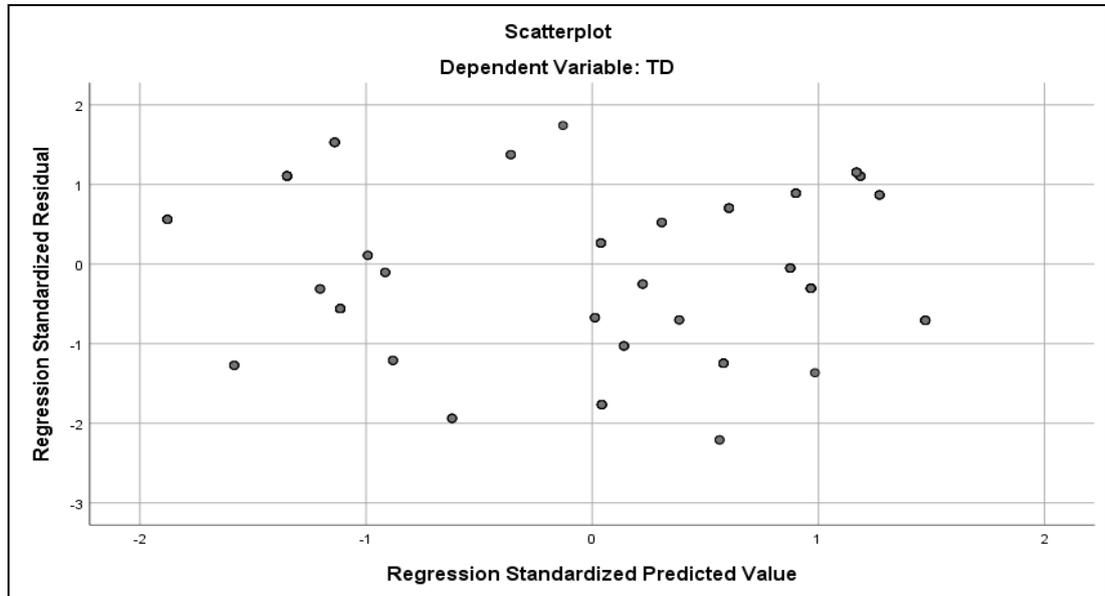
Figure 4.2 presents linearity assumptions results. The linearity test is a statistical test used to assess whether there is a linear relationship between two variables in a regression analysis. In simpler terms, it checks if the independent variable (predictor) has a straight-line impact on the dependent variable (outcome). In this figure the P – P Plot appears aligning on the diagonal x-axis. Hence the data is linear and suggests data analysis to be carried out.

Figure 4.2: P – P Plot for Regression Standardized Residuals Results

Source: Data Analysis, 2024

4.4.3 Homoscedasticity Test Results

The case residual dots in Figure 4.3 appear to be homoscedastic (equality of variance), dispersed in a rectangle around zero (0). Therefore, there is no reason to be concerned about the data's heteroscedasticity (unequal variation).

Figure 4.3: Scatter Plot

Source: Data Analysis, 2024

4.5 Multiple Regression Analysis Results

Multiple regression analysis was run to test the relationship between the multiple independent variables of factors affecting training and development (training needs assessment, budget constraints and leadership support) on the single dependent variable training and development.

4.5.1 Model Summary Results

Table 4.6 presents the regression model which predicts the dependent variable TD (Training and Development) using three predictors: LDS (Leadership Support), BUDGT (Budget), and TNA (Training Needs Assessment). The R Square value of .888 indicates that approximately 88.8% of the variance in the dependent variable (TD) can be explained by the independent variables (LDS, BUDGT, TNA) included

in the model. This suggests a strong relationship between the predictors and the training and development outcomes.

Table 4.6: Model Summary Results

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|--------------|-------------------|-----------------|--------------------------|-----------------------------------|
| 1 | .942 ^a | .888 | .886 | .09905 |

a. Predictors: (Constant), LDS, BUDGT, TNA
b. Dependent Variable: TD

Note: TNA= Training Needs Assessment, BUDGT = Budget Deficit, Leadership

Support. TD = Training and Development

Source: Data Analysis, 2024

4.5.2 Analysis of Variance Results

Table 4.7 displays the ANOVA (Analysis of Variance), which provides an overview of the sources of variance in the regression model that uses the predictors LDS (Leadership Support), BUDGT (Budget), and TNA (Training Needs Assessment) to predict the dependent variable TD (Training and Development). The amount of variation in the dependent variable (TD) that is explained by the regression model with the predictors (LDS, BUDGT, TNA) is indicated by the regression sums of squares (SSR) of 13.197. Regression has three degrees of freedom (df), which is equal to the number of predictors in the model. By dividing SSR by its degrees of freedom, one may calculate the mean square (MS) of 4.399, which is the average amount of variation explained by each predictor.

The regression model's overall significance is tested using the 448.418 F-statistic. A higher correlation between the predictors and the dependent variable is shown by a

bigger F-value. The F-statistic in this instance is extremely significant ($p < .001$), indicating that the regression model explains the variability in TD in a statistically meaningful manner overall.

Thus, the ANOVA findings show that the dependent variable TD (Training and Development) has a considerable amount of variability that is explained by the regression model with variables LDS, BUDGT, and TNA. The highly significant F-statistic (448.418, $p < .001$) indicates that, when considering the factors included in the model, the model is effective in predicting TD overall.

Table 4.7: ANOVA Results

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|------------|-----------------------|-----------|--------------------|----------|-------------------|
| 1 | Regression | 13.197 | 3 | 4.399 | 448.418 | .000 ^b |
| | Residual | 1.668 | 170 | .010 | | |
| | Total | 14.865 | 173 | | | |

a. Dependent Variable: TD

b. Predictors: (Constant), LDS, BUDGT, TNA

Note: TNA= Training Needs Assessment, BUDGT = Budget Deficit, Leadership

Support. TD = Training and Development

Source: Data Analysis, 2024

4.5.3 Regression Coefficient Analysis Results

Table 4.8 presents the regression coefficient results below that summarize the relationships between the predictors (TNA, BUDGT, LDS) and the dependent variable TD (Training and Development) in the regression model. TNA has a positive unstandardized coefficient ($B = 0.565$), indicating that for each unit increase in TNA,

TD is predicted to increase by 0.565 units, holding other predictors constant. The standardized coefficient (Beta = 1.400) suggests that TNA has a relatively strong positive impact on TD when compared to other predictors. The high t-value (17.506) and low p-value ($p < .001$) indicate that the relationship between TNA and TD is statistically significant. The collinearity statistics (tolerance = 0.103, VIF = 1.686) suggest that multicollinearity with other predictors is not a concern for TNA.

BUDGET has a negative unstandardized coefficient ($B = -0.233$), indicating that for each unit increase in budget allocation, TD is predicted to decrease by 0.233 units, holding other predictors constant. The negative standardized coefficient (Beta = -0.247) suggests that BUDGT has a moderate negative impact on TD when compared to other predictors. The significant t-value (-7.981, $p < .001$) indicates that the relationship between BUDGT and TD is statistically significant. The collinearity statistics (tolerance = 0.690, VIF = 1.450) suggest moderate multicollinearity with other predictors, but it is not severe.

LDS has a positive unstandardized coefficient ($B = 1.096$), indicating that for each unit increase in leadership support, TD is predicted to increase by 1.096 units, holding other predictors constant. The high standardized coefficient (Beta = 2.069) suggests that LDS has a strong positive impact on TD compared to other predictors. The very high t-value (27.502) and very low p-value ($p < .001$) indicate that the relationship between LDS and TD is highly statistically significant. The collinearity statistics (tolerance = 0.117, VIF = 1.578) suggest low multicollinearity with other predictors.

Table 4.8: Regression Coefficient Results

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .708 | .113 | | 6.255 | .000 | | |
| | TNA | .565 | .032 | 1.400 | 17.506 | .000 | .103 | 1.686 |
| | BUDGT | -.233 | -.029 | -.247 | -7.981 | .000 | .690 | 1.450 |
| | LDS | 1.096 | .040 | 2.069 | 27.502 | .000 | .117 | 1.578 |

a. Dependent Variable: TD

Note: TNA= Training Needs Assessment, BUDGT = Budget Deficit, Leadership

Support. TD = Training and Development

Source: Data Analysis, 2024

4.6 Discussion of the Findings

The purpose of the study was to assess factors affecting employee training and development in Tanzania's public sectors; the case study of TANESCO headquarters. Multiple regression analysis was used to test the relationship between independent variables (training needs assessment, budget constraints and leadership support) on a single dependent variable training and development. Also, descriptive statistics was used to analyze the demographic and variable descriptive statistics.

While keeping the study objectives front and centre, the discussion makes the material from the data analysis more understandable and contrasts or compares the current findings with what has been found in earlier, pertinent investigations by other writers. The contribution of each finding is summarized. As a result, the association of factors affecting the training and development of TANESCO is explained in detail by these results.

4.6.1 The Effect of Training Needs Assessment on Employees Training and Development

Training Needs Assessment (TNA) is a crucial initial step in designing effective training and development programs within organizations. It involves systematically identifying gaps between the current skills and knowledge levels of employees and the desired competencies needed to achieve organizational goals. This study found that training needs assessment was positive and significantly related to training and development. Similarly, Wan Ngah, and Buniyamin, (2021) found that TNA (Training Need Analysis) is more widely used within public agencies in Malaysia. Both studies show that Wan Ngah and Buniyamin's (2021) study likely provides empirical evidence that TNA processes contribute positively to enhancing employees' training and development outcomes. This correlation suggests that when organizations systematically identify and address training needs through structured assessments, employees benefit from targeted learning opportunities that improve their skills and competencies. Also, both findings are in knowledge of effective TNA ensures that training initiatives are aligned with organizational goals and objectives. By identifying specific skill gaps and developmental needs, organizations can tailor training programs to meet these requirements, thereby enhancing overall organizational effectiveness and competitiveness.

Furthermore, Adewole, Salawu, and Bello (2020) discovered that the participants indicated a need for training in each of the specified job subcategories and tasks. Training courses and programs were the respondents' favoured method for improving performance. This study demonstrated the value of assessing training needs to

pinpoint areas where nurses' training is lacking to have the greatest possible impact. Furthermore, Kazi (2020) discovered that TNA has a significant role in Kinondoni Municipality. All of the respondents did, however, concur that there are several issues with TNA implementation, particularly when it comes to staff development and training. These include a deficit in the budget, post-training staff turnover, and management-subordinate problems resulting from TNA.

However, Kirkpatrick & Kirkpatrick, (2016) found that poorly executed TNA processes or inadequate implementation strategies can lead to ineffective identification of training needs. This can result in mismatched training programs that do not address actual skill gaps or organizational needs effectively. Also, Dillulio, (2018) found that Inaccurate or incomplete data collected during TNA can lead to flawed conclusions about training needs. If the data used for assessment are not reliable or comprehensive, the resulting training programs may not adequately meet the needs of employees or the organization. Lastly, Markaki, Malhotra, Billings and Theus, (2021) found that when TNA processes are not aligned with broader organizational goals and strategies, the training programs developed may not contribute effectively to organizational success. This misalignment can diminish the perceived value and impact of training efforts.

4.6.2 The Effect of Budget Constraints on Employees Training and Development

Budget constraints can significantly impact an organization's ability to invest in training and development initiatives for its employees. This discussion explores how

budget limitations influence training and development outcomes, highlighting both challenges and strategies to mitigate these effects. This study found that budget constraints have a negative and significant effect on training and development. In a similar vein, Tang, Liu, and Liang (2022) discovered that online training and micro-training are useful cost-controlling tactics that preserve training course quality. Government and municipal assistance are also essential contributing variables that guarantee the need for an efficient training system to bridge the training gaps for ECE instructors. Additionally, Anaman's (2023) research showed that the local assembly faces technological, cultural, and political obstacles while implementing the budget. The funding deficit made it impossible for staff to receive training.

The study concludes that these issues can be resolved if local governments implement appropriate budget monitoring and review procedures, examine historical patterns and project them into the future to estimate revenue and expenses and develop thorough budgets to reduce the effects of implementation variances. Finally, Kaaya and Shishiwa (2021) discovered that most of the participants were aware of the state of TANESCO at the moment and the variables, such as the budget deficit, that affect staff training programs that are effective. Similarly to, the primary obstacles to TANESCO's staff training programs' success included the Annual Training Budget, official accountability, training motivation, clarity, resources, training needs assessments, and selection procedures.

Similar findings suggest that many organizations, regardless of size or sector, face finite budgets allocated to training and development. This constraint arises from

competing financial priorities such as operational expenses, capital investments, and profitability targets. Also, Economic fluctuations, market uncertainties, and financial downturns can exacerbate budget constraints. Organizations may implement cost-cutting measures across departments, including training, to maintain financial stability during challenging economic periods. Moreover, Budget constraints often lead to a reduction in the variety of training programs offered. Organizations may streamline training initiatives or focus on essential skill development areas, limiting the breadth of learning opportunities available to employees.

However, some studies and insights discuss strategies and conditions under which organizations manage to mitigate the negative impacts of budget constraints on training and development. Mone et al., (2017) studies suggest that organizations can mitigate the negative effects of budget constraints by strategically allocating resources to prioritize critical training needs aligned with strategic goals. Also, CIPD, (2020) found that organizations that leverage cost-effective training methods, such as online learning platforms or in-house training resources, can maintain effective training outcomes even with limited budgets. Moreover, Kerwin, (2019) found that innovations in training delivery methods, such as virtual reality (VR) simulations or gamified learning modules, can enhance learning effectiveness without significantly increasing costs, thereby minimizing the impact of budget constraints.

4.6.3 The Effect of Leadership Support on Employee Training and Development

Leadership support plays a critical role in shaping the success and effectiveness of training and development initiatives within organizations. This discussion based on

findings explores how leadership support influences employee training and development, highlighting its significance, key benefits, and strategies for fostering a supportive environment. According to this study, training and development were positively and strongly correlated with leadership support. Sujchaphong, Nguyen, Melewar, Sujchaphong, and Chen (2020) discovered a positive correlation between internal brand communication activities, employee brand support, and transformational leadership traits of the immediate leaders about brand-centred training and development. The relationship between internal brand communication activities and employee brand support is fully mediated by brand-centred training and development activities, as evidenced by the unexpected lack of significance in the direct relationship between the two. Additionally, Mwendwa, McAuliffe, Uduma, Masanja, and Mollel (2017) discovered that the implementation of systemic record-keeping systems, such as staff files and job descriptions, was the most noticeable behavioural shift attributed to staff. The implementation of these systems resulted in enhanced work conditions and supervisor-health provider communication. Consequently, this simplified the process of staff supervision and reduced the amount of time spent on it. Clear job definitions made it possible for employees to work more productively with human resources, and the installation of registers to track staff entry and exit from the building decreased the number of unexcused absences.

Similar findings are because when organizational leaders consistently communicate the importance of training and development, it reinforces a culture where learning is valued as a core organizational value. This alignment fosters a shared understanding

among employees that continuous improvement and skill enhancement are integral to achieving organizational goals. Moreover, organizations with strong leadership support for training initiatives tend to establish norms where learning is seen as a continuous process rather than a one-time event. This cultural alignment encourages employees to actively engage in development opportunities, knowing they have the support and encouragement of their leaders.

Lastly, Leadership support often translates into adequate budget allocations for training programs, ensuring that resources are available to deliver high-quality learning experiences. This financial commitment allows organizations to invest in innovative training methods, expert trainers, and necessary learning technologies that enhance training effectiveness.

Dea and Tekalign's analysis from 2022, however, supported the insufficient application of managerial leadership positions and the development of human resource capabilities that provide value. There is a substantial and favourable correlation between developing human resource capabilities and managerial leadership jobs. Leadership positions in management have a big impact on how well institutions can develop their human resource capabilities.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Overview

The TANESCO training and development in this study were assessed against the independent variables of training needs assessment, budget constraints and leadership factors. This chapter presents a summary of findings, conclusion, implications and recommendations,

5.2 Summary of the Findings

In this study, training needs assessment is positive and significantly related to training and development. TNA helps identify specific skill gaps and developmental needs among employees. By conducting thorough assessments, organizations can pinpoint areas where employees require training to enhance job performance and career growth. Also, effective TNAs enable TANESCO to design and implement targeted training programs. By aligning training content with identified needs, organizations ensure that training initiatives are relevant and beneficial to employees' job roles and responsibilities. It was observed that apart from difficulties TANESCO can conduct training needs assessment for laying down proper training and development t programs.

Secondly, regarding budget constraints, it was found that budget constraints are negative and significantly related to training and development at TANESCO. Limited budgets often result in a reduction in the frequency and scope of training programs offered to employees. Organizations may prioritize essential training needs or opt for

cost-effective solutions, which can restrict access to diverse learning opportunities. Also, Budget constraints can compromise the quality and variety of training programs available to employees. Organizations may cut back on advanced training technologies, expert trainers, or interactive learning methods, impacting the overall effectiveness and engagement of training initiatives. Lastly, Limited training investments can restrict employees' opportunities for career advancement and skill enhancement. Without adequate development opportunities, employees may experience stagnation in their professional growth and find it challenging to meet evolving job demands.

Third, it was found in this study that leadership support was positive and significantly related to training and development at TANESCO. Although there is a budget problem still TANESCO management can support various training for their staff. TANESCO leaders endorse and prioritize training and development initiatives; it aligns these efforts with organizational goals and strategic priorities. This alignment ensures that training investments contribute directly to improving organizational performance and achieving long-term objectives. Also, Supportive leaders allocate sufficient resources, including budget, time, and personnel, to support comprehensive training programs. This enables organizations to invest in high-quality training methods, expert instructors, and advanced learning technologies, enhancing the effectiveness and relevance of training initiatives.

5.3 Conclusion

This study assessed the factors affecting training and development at TANESCO HQ. These factors identified and assessed were Training needs assessment, budget

constraints and leadership support. Using a quantitative approach and a multiple regression analysis in navigating these factors, TANESCO and other public sector organizations in Tanzania can optimize training and development outcomes by addressing budgetary challenges, securing leadership commitment, conducting rigorous TNAs, nurturing a supportive organizational culture, and maintaining strategic alignment with broader organizational goals. By investing in these areas, organizations like TANESCO can foster a skilled and motivated workforce capable of driving sustainable growth and fulfilling their mandates effectively in the dynamic landscape of Tanzania's public sector.

5.4 Implications

Conducting the study on assessing the factors affecting training and development at TANESCO has some implications. First, on training needs assessment, conducting comprehensive TNAs ensures that training programs at TANESCO address specific skill gaps and organizational needs. Regular updates to TNAs based on evolving job requirements and industry trends are essential for maintaining training relevance.

On budgetary constraints, addressing budgetary constraints requires strategic resource allocation. Organizations like TANESCO need to prioritize training investments that yield the highest return on investment (ROI) in terms of skill enhancement and organizational impact. Also, Finding cost-effective methods such as online learning platforms or leveraging partnerships can help stretch training budgets while still providing valuable learning experiences. Regarding leadership support, strong leadership commitment is crucial for sustaining effective training and

development initiatives. Leaders at TANESCO should continue to advocate for and prioritize employee development as a strategic imperative. Also, Leaders should actively participate in training activities to demonstrate their commitment to continuous learning, inspiring employees to engage more enthusiastically in professional development opportunities.

5.5 Recommendations

Based on the findings this study provides some recommendations.

5.5.1 The Effect of Training Teed Assessment on Employees Training and Development

TANESCO should ensure that TNAs are conducted regularly to identify evolving skill gaps and training needs within the organization. This should include input from both employees and managers to capture a comprehensive view of developmental requirements.

Also, integrate the findings of TNAs closely with TANESCO's strategic objectives and operational priorities. This alignment ensures that training initiatives directly contribute to organizational success and address critical business needs.

Lastly, allocate resources based on TNA findings to prioritize training programs that have the greatest impact on closing skill gaps and enhancing job performance. This strategic allocation helps optimize the use of training budgets and resources.

5.5.2 The Effect of Budget Constraints on Employees Training and Development

TANESCO should identify and prioritize critical training needs that align with TANESCO's strategic objectives despite budget limitations. Focus on skills that are essential for maintaining operational efficiency and achieving organizational goals. Also, optimize the allocation of training budgets by focusing on high-impact and cost-effective training programs. Consider leveraging technology for online learning platforms, which can be more economical than traditional classroom-based training. Moreover, implement strategies to reduce training costs without compromising quality. This may include negotiating favourable rates with training providers, conducting in-house training sessions led by internal experts, or utilizing open-source educational resources. Lastly, advocate internally for increased budget allocations dedicated to training and development. Demonstrate the long-term benefits of investing in employee skills and capabilities, including improved productivity, employee retention, and organizational resilience.

5.5.3 The Effect of Leadership Support on Employee Training and Development

Leaders at all levels within TANESCO should visibly demonstrate their commitment to training and development initiatives. Actively participate in training programs, engage with employees during sessions, and emphasize the importance of continuous learning. Also, leadership should advocate for adequate resources, including budgetary allocations, time for training activities, and access to necessary facilities and technologies. Ensure that these resources are sufficient to support comprehensive training and development programs. Moreover, ensure that training and development

efforts are closely aligned with TANESCO's strategic objectives. Leaders should articulate how investing in employee development contributes to achieving organizational goals, enhancing performance, and maintaining competitiveness. Lastly, leaders should lead by example in embracing continuous learning and professional development. Invest in their skills and competencies, share their learning experiences, and encourage others to follow suit.

5.6 Recommendations for Further Studies

To monitor the long-term effects of training and development programs on worker performance, job satisfaction, retention rates, and organizational outcomes at TANESCO, conduct longitudinal studies. This would offer valuable perspectives on the long-term efficacy of training initiatives. Furthermore, Examine the differences in training and development methods between Tanzania's public sector companies, such as TANESCO. Analyze differences in budget allocations, leadership support, training methods, and outcomes to identify best practices and areas for improvement. Lastly, examine the influence of government policies and regulations on training and development initiatives within Tanzania's public sector. Assess how policy changes affect funding, resource allocation, and the implementation of training programs at TANESCO.

REFERENCES

- Adewole, D. A., Salawu, M. M., & Bello, S. (2020). Training needs assessment and preferred approach to enhancing work performance among clinical nurses in University College Hospital (UCH), Ibadan, Oyo State, South-western Nigeria. *International Journal of Nursing and Midwifery*, *12*(4), 130-138.
- Adeyi, A. O., Apansile, E. K., Okere, W., & Okafor, L. I. (2018). Training and development and organisational performance: Standpoint from Private tertiary institutions in Nigeria. *Journal of Economics, Management and Trade*, *21*(12), 1-10.
- Alita, D., Putra, A. D., & Darwis, D. (2021). Analysis of classic assumption test and multiple linear regression coefficient test for employee structural office recommendation. *IJCCS (Indonesian Journal of Computing and Cybernetics Systems)*, *15*(3), 295-306.
- Anaman, P. D. (2023). Challenges to Budget Implementation in Public Institutions at the Local Level of Ghana. *International Journal of Innovative Science and Research Technology*, *8*(3), 733-741.
- Armstrong, M. (2021). *Armstrong's Handbook of Human Resource Management Practice* (15th ed.). Kogan Page.
- Bangdiwala, S. I. (2018). Regression: multiple linear. *International journal of injury control and safety promotion*, *25*(2), 232-236.
- Becker, G. S. (1994). *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. University of Chicago Press.

- Becker, G. S. (2009). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago press.
- Brixiová, Z., Kangoye, T., & Said, M. (2020). "Training, Human Capital, and Labor
- Burhan Ismael, N., Jabbar Othman, B., Gardi, B., Abdalla Hamza, P., Sorguli, S., Mahmood Aziz, H., ... & Anwar, G. (2021). The role of training and development on organizational effectiveness. *Ismael, NB, Othman, BJ, Gardi, B., Hamza, PA, Sorguli, S., Aziz, HM, Ahmed, SA, Sabir, BY, Ali, BJ, Anwar, G.(2021). The Role of Training and Development on Organizational effectiveness. International Journal of Engineering, Business and Management, 5(3), 15-24.*
- Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: why small sample size undermines the reliability of neuroscience. *Nature reviews neuroscience, 14(5), 365-376.*
- Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen Jr, D. J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of applied psychology, 96(3), 443.*
- De la Fuente, A., & Ciccone, A. (2003). *Human capital in a global and knowledge-based economy* (Vol. 918). Luxembourg: Office for Official Publications of the European Communities.
- Dea, T., & Tekalign, T. F. (2022). The practice of managerial leadership roles and its effect on building human resource capability: The case of North Wollo

- Zone, Amhara Region, Ethiopia. *Asia-Pacific Journal of Management Research and Innovation*, 18(3-4), 131-144.
- EL Hajjar, S. T., & Alkhanaizi, M. S. (2018). Exploring the factors that affect employee training effectiveness: A case study in Bahrain. *Sage Open*, 8(2), 2158244018783033.
- Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. *European journal of Business and Management*, 5(4), 137-147.
- Geels, F. W. (2022). Causality and explanation in socio-technical transitions research: Mobilising epistemological insights from the wider social sciences. *Research policy*, 51(6), 104537.
- Goldstein, I. L., & Ford, J. K. (2002). Training in organizations: Needs assessment, development, and evaluation (4th ed.). Wadsworth.
- Grace, J. B., & Irvine, K. M. (2020). Scientist's guide to developing explanatory statistical models using causal analysis principles. *Ecology*, 101(4), e02962.
- Haile, Z. T. (2023). Power analysis and exploratory research. *Journal of Human Lactation*, 39(4), 579-583.
- Hancock, D. R., Algozzine, B., Lim, J. H. (2021). Doing case study research: A practical guide for beginning researchers.
- Hassan, F. I. (2021). The Effect of Training and Development Program on Employees in case of Jig-Jiga City Administration Council, Somali Regional State, Ethiopia. *Turkish Online Journal of Qualitative Inquiry*, 12(7).

- Igudia, P. O. (2022). Employee training and development, and organisational performance: a study of small-scale manufacturing firms in Nigeria. *American Journal of Economics and Business Management*, 5(5), 38-54.
- Jackson, S. E., Schuler, R. S., & Werner, S. (2021). *Managing Human Resources* (13th ed.). Cengage Learning.
- Kaaya, N. D., & SHISHIWA, J. D. (2021). Factors affecting effective staff training programmes in the Public organizations in Tanzania.
- Kabigumila, T. S. (2021). *Factors Affecting the Implementation of Training Programs among Employees of Public Institutions in Tanzania: The Case of Public Service Social Security Fund (PSSSF)* (Doctoral dissertation, The Open University of Tanzania).
- Karim, M. M., Choudhury, M. M., & Latif, W. B. (2019). The impact of training and development on employees' performance: an analysis of quantitative data. *Noble International Journal of Business and Management Research*, 3(2), 25-33.
- Kazi, K. H. (2020). *Effectiveness of Employee Training Needs Assessment in the Public Organizations in Tanzania: A Case of Kinondoni Municipality* (Doctoral dissertation, The Open University of Tanzania).
- Lakens, D. (2022). Sample size justification. *Collabra: psychology*, 8(1), 33267.
- Lameck, W. U. (2022). The Impact of Training and Development on Staff Performance: A Study of People's Bank of Zanzibar, Tanzania. *Journal of Governance & Public Policy*, 12(1), 68-85.

- Lufunyo, H. (2013). Impact of public sector reforms on service delivery in Tanzania. *Journal of Public Administration and Policy Research*, 5(2), 26-49.
- Mankiw, N. G., & Taylor, M. P. (2014). Economics (3rd ed.). Cengage Learning.
- Markets in Developing Economies." *Journal of Development Economics*, 143, 102381.
- Mohajan, H. K. (2020). Quantitative research: A successful investigation in natural and social sciences. *Journal of Economic Development, Environment and People*, 9(4), 50-79.
- Mwendwa, P., McAuliffe, E., Uduma, O., Masanja, H., & Mollel, H. (2017). The impact of supportive supervision on the implementation of HRM processes; a mixed-methods study in Tanzania.
- Nama, K., Daweti, B., Lourens, M. E., & Chikukwa, T. (2022). The impact of training and development on employee performance and service delivery at a local municipality in South Africa. *Problems and Perspectives in Management; Vol. 20, Issue 4*.
- Newton, P. E. (2012). Clarifying the consensus definition of validity. *Measurement: Interdisciplinary Research & Perspective*, 10(1-2), 1-29.
- Noe, R. A. (2017). Employee training and development (7th ed.). McGraw-Hill Education.
- Noe, R. A. (2020). Employee Training and Development (8th ed.). McGraw-Hill Education.
- Nyaga, R. (2022). "The Role of Training and Development on Employee

- Ohemeng, F. L., & Kanga, O. (2020). Administrative leaders as institutional entrepreneurs in developing countries: A study of the development and institutionalization of performance management in Ghana's public service. *Public Administration and Development*, 40(1), 87-100.
- Östlund, U., Kidd, L., Wengström, Y., & Rowa-Dewar, N. (2011). Combining qualitative and quantitative research within mixed method research designs: a methodological review. *International journal of nursing studies*, 48(3), 369-383.
- Pallangyo, W. A., & Hanai, A. E. (2020). The Influence of Training and Development on Employee Retention: Empirical Evidence from Banking Industry in Tanzania. *International Journal of Political Science (IJPS)*, 11.
- Performance in Public Institutions." *Journal of Public Administration*, 15(2), 35-46.
- Petrova, E., Dewing, J., & Camilleri, M. (2016). Confidentiality in participatory research: Challenges from one study. *Nursing ethics*, 23(4), 442-454.
- Pindyck, R. S., & Rubinfeld, D. L. (2015). *Microeconomics* (8th ed.). Pearson.
- Priyankara, H. P. R., Luo, F., Saeed, A., Nubuor, S. A., & Jayasuriya, M. P. F. (2018). How does leader's support for environment promote organizational citizenship behaviour for environment? A multi-theory perspective. *Sustainability*, 10(1), 271.
- Researchers' views on, and experiences with, the requirement to obtain informed consent in research involving human participants: a qualitative study. *BMC medical ethics*, 21, 1-11.

- Rivière, V. M., & Sitar, A. S. (2003). Critical role of leadership in nurturing a knowledge-supporting culture. *Knowledge management research & practice, 1*, 39-48.
- Rodriguez, J., & Walters, K. (2017). The importance of training and development in employee performance and evaluation. *World Wide Journal of Multidisciplinary Research and Development, 3*(10), 206-212.
- Rosopa, P. J., Schaffer, M. M., & Schroeder, A. N. (2013). Managing heteroscedasticity in general linear models. *Psychological methods, 18*(3), 335.
- Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological science in the public interest, 13*(2), 74-101.
- Schein, E. H. (2017). *Organizational Culture and Leadership* (5th ed.). Wiley. This book outlines how structured training programs can impact employees' knowledge, values, and beliefs, influencing organizational culture and behavior.
- Schreier, M. (2018). Sampling and generalization. *The SAGE handbook of qualitative data collection, 84-97*.
- Sujchaphong, N., Nguyen, B., Melewar, T. C., Sujchaphong, P., & Chen, J. (2020). A framework of brand-centred training and development activities, transformational leadership and employee brand support in higher education. *Journal of Brand Management, 27*, 143-159.

- Tang, X., Liu, Y., & Liang, J. (2022). Research on the Budget Evaluation: Training and Its Cost Control for ECE Educators in China. *Journal of Positive School Psychology*, 6(3), 9509-9519.
- Ulrich, G. (2017). Research ethics for human rights researchers. In *Research methods in human rights* (pp. 192-221). Edward Elgar Publishing.
- Wagenaar, B. H., Augusto, O., Ásbjörnsdóttir, K., Akullian, A., Manaca, N., Chale, F., ... & with input from the INCOMAS Study Team João Luis Manuel Leecresha Hicks Arlete Mahumane James Pfeiffer Stephen Gloyd Fatima Cuembelo Miguel Nhumba Joaquim Lequechane Manuel Napua Lucia Vieira. (2018). Developing a representative community health survey sampling frame using open-source remote satellite imagery in Mozambique. *International Journal of Health Geographics*, 17, 1-13.
- Wan Ngah, W. A. J., & Buniyamin, N. (2021). The evaluation of TVET Instructor's training needs analysis using curriculum development based on vocational ability structure in Malaysia. *Journal of Electrical and Electronic Systems Research (JEESR)*, 19, 185-192.
- White, P., Redford, P., & Macdonald, J. (2019). That assumption of normality.
- Xu, A., Baysari, M. T., Stocker, S. L., Leow, L. J., Day, R. O., & Carland, J. E. (2020).
- Young, T. J. (2015). Questionnaires and surveys. *Research methods in intercultural communication: A practical guide*, 163-180.

APPENDICES

Appendix I Questionnaires

Respondents Survey Questionnaire

Dear respondent, the purpose of this survey is to determine the ***FACTORS AFFECTING EMPLOYEES TRAINING AND DEVELOPMENT IN TANZANIA PUBLIC SECTORS; THE CASE STUDY OF TANESCO HEAD QUARERS.***

You are requested to describe your perception using knowledge on factors which affects training and development in public organizations, in this case TANESCO. Data given will be secret and usefully for academic purpose in Open University of Tanzania. Kindly, you are requested to respond these questions below to facilitate valuable information which will be usefully on this the study.

SECTION A: GENERAL INFORMATION (PUT AN APPROPRIATE ANSWER)

Please put a tick to the right response in the space provided below each item

| | | | | | | |
|----|--------------------------------|-------------|-------------|-------------|-------------|----------------|
| a) | Age | 15 – 20 | 21 - 30 | 31 – 40 | 41 – 50 | 51 and above |
| | | | | | | |
| b) | Gender | Male | Female | | | |
| | | | | | | |
| c) | Indicate your Departments/Unit | | | | | |
| d) | Education level | Certificate | Diploma | Degree | Masters | PhD |
| | | | | | | |
| e) | Experience at TANESCO | 1 – 5 years | 6 –10 years | 11-15 years | 16-20 years | Above 20 years |
| | | | | | | |

On the following statements of knowledge transfer practices, please indicate your level of disagree or agreed based on the scale of 1-5 where 1 strongly disagree (SD), 2 disagree (DA), 3 neutral (N), 4 agree and 5 strongly agree (SA).

| Training Needs Analysis | Agreement level | | | | |
|---|------------------------|---|---|---|---|
| TANESCO provides adequate resources for conducting Training Needs Analysis | 1 | 2 | 3 | 4 | 5 |
| Leadership actively promotes and supports the TNA process | 1 | 2 | 3 | 4 | 5 |
| TNA findings are effectively utilized in shaping training and development initiative | 1 | 2 | 3 | 4 | 5 |
| Employees are actively involved in identifying their own training needs | 1 | 2 | 3 | 4 | 5 |
| There are mechanisms in place for employees to provide feedback on training needs assessment processes | 1 | 2 | 3 | 4 | 5 |
| The organization utilizes a variety of methods (surveys, interviews, performance evaluations) to collect data for TNA. | 1 | 2 | 3 | 4 | 5 |
| The data collection methods used are effective in capturing diverse training needs across different departments or job roles. | 1 | 2 | 3 | 4 | 5 |
| There are dedicated personnel responsible for analyzing TNA data. | 1 | 2 | 3 | 4 | 5 |
| TNA results are interpreted accurately to identify priority training areas. | 1 | 2 | 3 | 4 | 5 |
| The organization effectively implements training programs based on TNA findings. | 1 | 2 | 3 | 4 | 5 |
| There are mechanisms in place to evaluate the effectiveness of training interventions post-implementation. | 1 | 2 | 3 | 4 | 5 |

On the following statements of knowledge transfer practices, please indicate your level of disagree or agreed based on the scale of 1-5 where 1 strongly disagree (SD), 2 disagree (DA), 3 neutral (N), 4 agree and 5 strongly agree (SA).

| Budget Constraints | Agreement level | | | | |
|--|------------------------|---|---|---|---|
| TANESCO does allocate sufficient budget for training and development initiatives. | 1 | 2 | 3 | 4 | 5 |
| Budget constraints have led to a reduction in the overall investment in training programs. | 1 | 2 | 3 | 4 | 5 |
| Budget constraints limit the variety of training programs offered to employees. | 1 | 2 | 3 | 4 | 5 |
| The quality of training programs has been compromised due to budget constraints. | 1 | 2 | 3 | 4 | 5 |
| Employees face challenges in accessing necessary training resources (e.g., materials, tools, technology) due to budget constraints. | 1 | 2 | 3 | 4 | 5 |
| Budget constraints hinder the availability of training facilities and equipment necessary for effective learning experiences. | 1 | 2 | 3 | 4 | 5 |
| Budget constraints negatively impact employees' opportunities for skill enhancement and career development. | 1 | 2 | 3 | 4 | 5 |
| Employees feel demotivated or disengaged due to limited investment in training and development. | 1 | 2 | 3 | 4 | 5 |
| Budget constraints have affected the organization's ability to align training initiatives with strategic goals and priorities. | 1 | 2 | 3 | 4 | 5 |
| There are strategies in place to prioritize training initiatives that align with organizational objectives despite budget constraints. | 1 | 2 | 3 | 4 | 5 |

On the following statements of knowledge transfer practices, please indicate your level of disagree or agreed based on the scale of 1-5 where 1 strongly disagree (SD), 2 disagree (DA), 3 neutral (N), 4 agree and 5 strongly agree (SA).

| Leadership Support | Agreement level | | | | |
|--|------------------------|---|---|---|---|
| TANESCO leaders communicate the importance of training and development initiatives effectively. | 1 | 2 | 3 | 4 | 5 |
| Leaders actively endorse and support employees' participation in training programs. | 1 | 2 | 3 | 4 | 5 |
| Organizational leaders allocate sufficient resources (e.g., budget, time, personnel) to support training and development activities. | 1 | 2 | 3 | 4 | 5 |
| Leaders prioritize investment in training and development initiatives, even during periods of budget constraints. | 1 | 2 | 3 | 4 | 5 |
| Leaders actively participate in training activities and demonstrate a commitment to their own professional development. | 1 | 2 | 3 | 4 | 5 |
| Leaders serve as positive role models for continuous learning and skill enhancement. | 1 | 2 | 3 | 4 | 5 |
| Leaders recognize and reward employees who actively engage in training and development activities. | 1 | 2 | 3 | 4 | 5 |
| Employees perceive that their participation in training programs is valued and acknowledged by organizational leaders. | 1 | 2 | 3 | 4 | 5 |
| Leaders provide constructive feedback and guidance to employees regarding their training and development goals. | 1 | 2 | 3 | 4 | 5 |
| Employees feel supported by leaders in identifying and addressing their developmental needs. | 1 | 2 | 3 | 4 | 5 |

On the following statements of knowledge transfer practices, please indicate your level of disagree or agreed based on the scale of 1-5 where 1 strongly disagree (SD), 2 disagree (DA), 3 neutral (N), 4 agree and 5 strongly agree (SA).

| Training and Development | Agreement level | | | | |
|---|------------------------|---|---|---|---|
| TANESCO offers a variety of training programs to employees. | 1 | 2 | 3 | 4 | 5 |
| Training programs offered by TANESCO are relevant to the job role and career development needs of its employees | 1 | 2 | 3 | 4 | 5 |
| The delivery methods used in training programs (e.g., workshops, online courses, on-the-job training) are effective in facilitating learning. | 1 | 2 | 3 | 4 | 5 |
| Training programs incorporate interactive and engaging activities to enhance learning outcomes. | 1 | 2 | 3 | 4 | 5 |
| Employees have access to necessary training resources (e.g., materials, tools, technology) to support their learning. | 1 | 2 | 3 | 4 | 5 |
| The organization provides adequate support for employees' participation in training programs (e.g., time off, financial assistance). | 1 | 2 | 3 | 4 | 5 |
| Feedback mechanisms are in place to assess the effectiveness of training programs and instructors. | 1 | 2 | 3 | 4 | 5 |
| Employees receive constructive feedback on their performance and progress during and after training programs. | 1 | 2 | 3 | 4 | 5 |
| training and Development Improve in job performance and skills development. | 1 | 2 | 3 | 4 | 5 |
| There is career advancement opportunities within TANESCO. | 1 | 2 | 3 | 4 | 5 |



Ref. No OUT/PG202286068

25th June, 2024

Managing Director,
TANESCO,
P.O. Box 453,
DODOMA.

Dear Managing Director ,

**RE: RESEARCH CLEARANCE FOR MR. DEODAT RENATUS REG NO:
PG202286068**

2. The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

3. To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you Mr Deodat Renatus, Reg.No: PG202286068), pursuing Doctor of Philosophy (PhD). We here by grant this

clearance to conduct a research titled " Factors Affecting Employee Training and Development Tanzania Public Sectors ". He will collect her data at your office from July 1st , 2024 to 1st August 2024.

4. In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA



Prof.Gwahula Raphael Kimamala

For: **VICE CHANCELLOR**

"Tunng'angaza Maisha Yako"



"We Light Up Your Life"

**SHIRIKA LA UMEME TANZANIA
TANZANIA ELECTRIC SUPPLY COMPANY LIMITED**

Head Office, P.O.Box 453 Dodoma, Tanzania. Tel: + 255 026 2323456/7, Web: www.tanESCO.co.tz

Our Ref:

DHRA/PT

Date:

23rd July, 2024

Rector,
The Open University of Tanzania,
P. O. Box 23409,
DAR ES SALAAM.

**Re: ACCEPTANCE FOR RESEARCH CLEARANCE IN RESPECT OF
MR. DEODAT R. RENATUS KAPINGA**

The above mentioned subject refers

2. We acknowledge receiving your letter dated 25th June, 2024 with ref no. OUT/PG202286068 regarding the above mentioned subject.
3. We wish to inform you that the approval has been granted for your student Mr. Deodat Kapinga for research Clearance at **TanESCO - Head Office**
4. Also we wish to inform you that any financial cost for research and data Collection is not the responsibility of TANESCO
5. Inform him to report to Manager Learning and Development for placement.

Sophia F.A. Tungaraza
FOR. MANAGING DIRECTOR

